

# **Biological Assessment for Boom Deployment and Retrieval Actions in the Cahaba River, Alabama, Associated with the Colonial Pipeline CR251 Incident**

Prepared for:

U.S. Fish and Wildlife Service  
Alabama Ecological Services Field Office  
1208-B Main Street  
Daphne, AL 36526

Prepared by:

U.S. Environmental Protection Agency  
EPA Region 4  
61 Forsyth Street SW  
Atlanta, GA 30303

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# 1 INTRODUCTION

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## 1.1 Background

On the afternoon of October 31, 2016, a contract crew working on the Colonial Pipeline Company (Colonial) gasoline mainline in Shelby County, Alabama, struck the line. The gasoline that was released from the damaged pipeline ignited a fire, which resulted in several injuries and two fatalities to the contractors' employees. After the fire was extinguished and the remaining product removed from the line, the damaged portion of the line was removed and replaced, and then the line was restarted. Because of the proximity of the incident to County Road 251 in Shelby County, Alabama, the incident is referred to as the "CR251" incident.

Although no observable impacts were noted to nearby waterways or drainage paths, out of an abundance of caution, Colonial, collaborating with Incident Command (comprised of the United States Environmental Protection Agency (USEPA), the State of Alabama, local fire and emergency authorities, and Colonial), deployed containment and absorbent boom at three different locations on the Cahaba River on November 1, 2016. The boom was removed from the Cahaba River on November 5, 2016. The location of the CR251 incident in relation to the boom deployment locations is presented in Figure 1.

Colonial also conducted air monitoring to ensure the safety of the workers and public, and collected and evaluated sediment and surface water samples from both the Cahaba River and Shades Creek. The extensive surface water sampling conducted in response to the incident revealed that there were no surface water impacts associated with the event, that is, no released product reached either Shades Creek or the Cahaba River.

## 1.2 Process and Purpose

Federal agencies (e.g., USEPA), as required under Section 7 of the Endangered Species Act (ESA), are required to determine whether their actions may affect listed or proposed species and designated and proposed critical habitat<sup>1</sup> (henceforth, referred to as protected resources). If an

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<sup>1</sup> Critical habitat is defined in Section 3 of the Endangered Species Act (Act) as (i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

action has the potential to affect threatened and endangered species, a Biological Assessment should be conducted.

During a November 4, 2016 site visit to the Incident Command Center and the three boom locations on the Cahaba River, the United States Fish and Wildlife Service (USFWS, Andy Ford) determined that federally listed species had the potential to be present in the areas where the boom placement and retrieval actions took place. As such, the USFWS (Andy Ford) indicated to Joe Nicolette (EPS, Inc.) that they would be requesting that the USEPA submit a Biological Assessment, as part of an emergency ESA consultation, regarding the boom deployment and retrieval actions on the Cahaba River. For this incident, Andy Ford (USFWS) called Karen Buerki (USEPA) on November 8, 2016 regarding the need for an emergency ESA consultation (for the expected take of listed snails from the precautionary placement and retrieval of boom during the response). An overview of the Section 7 emergency consultation process is outlined in the flow chart in Attachment I.

Once this “may affect” determination was made, the Federal agency (in this case the USEPA) must either request USFWS concurrence with a “may affect, but not likely to adversely affect” finding or request initiation of formal consultation. Both require a written analysis to be submitted to USFWS. This analysis is typically transmitted in a document referred to as a Biological Assessment or Biological Evaluation. The primary role of the Biological Assessment in this instance is to document the USEPA’s conclusions and the rationale to support those conclusions regarding the effects of their actions on protected resources. It should be noted that this was an emergency response situation and the actions were conducted as part of the emergency response under the direction of the Incident Command. This document represents the Biological Assessment for boom deployment and retrieval actions that have already been implemented and completed as part of the CR251 incident emergency response.

Following this analysis, USEPA presents their Section 7 Finding for proposed or listed species and proposed or designated critical habitat that may be present in the Action area. Generally, within a Biological Assessment, a Finding will be categorized under one of the following three determinations:

- “No effect” means there will be no impacts, positive or negative, to listed or proposed resources. Generally, this means no listed resources will be exposed to action and its environmental consequences. Concurrence from the Service is not required.
- “May affect, but not likely to adversely affect” means that all effects are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the impact and include those effects that are undetectable, not measurable, or cannot be evaluated. Discountable effects are those extremely unlikely to occur. These determinations require written concurrence from the Service.

- "May affect, and is likely to adversely affect" means that listed resources are likely to be exposed to the action or its environmental consequences and will respond in a negative manner to the exposure.

The “Finding” categories described above address the chance or potential that an “individual” may be affected given the action. When a Federal agency determines, through a Biological Assessment or other review, that its action is likely to adversely affect a listed species, the USFWS will prepare a Biological Opinion on whether the proposed activity will jeopardize the continued existence of a listed species. In deciding on whether an action will result in jeopardy, the USFWS begins by looking at the status of the species, or “baseline.” Added to the baseline are the various effects – direct, indirect, interrelated, and interdependent – of the proposed Federal action. The USFWS also examines the cumulative effects of other non-Federal actions that may occur in the Action area, including state, tribal, local, or private activities that are reasonably certain to occur in the project area.

The USFWS’s analysis is then measured against the definition of jeopardy. Under the ESA, jeopardy occurs when an action is reasonably expected, directly or indirectly, to diminish a species’ numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced.

In some cases, the USFWS finds that an action may adversely affect a species, but not jeopardize its continued existence. When this happens, the USFWS prepares an incidental take statement for the proposed Federal project. Under most circumstances, the ESA prohibits take, which is defined as harming (includes killing) or harassing a listed species. Incidental take – take that results from a Federal action but is not the purpose of the action – may be allowed when the USFWS approves it through an incidental take statement. The statement includes the amount or extent of anticipated take due to the Federal action, reasonable and prudent measures to minimize the take, and terms and conditions that must be observed when implementing those measures.

In this case, the Biological Opinion would address the emergency response actions that have been completed. In an emergency response situation, it is understood that the USFWS will provide a final Biological Opinion to the USEPA with the incidental take statement that includes an exemption for the incidental take that may have occurred during the emergency response.

The Biological Assessment provided herein includes a description of the boom deployment and retrieval actions; a description of the Action area; a justification for the expedited consultation; species that may be present in the Action area and those species that have been documented in the area through field surveys or observation; an effects analysis (*i.e.*, an evaluation of the response actions and the potential impacts of the actions on potentially affected protected resources including steps taken to minimize a potential take); and the basis, conclusions, and determination of effects (*i.e.*, the Finding).

## 2 ACTION DESCRIPTION

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As stated earlier, containment and absorbent booms were deployed at three different locations on the Cahaba River on November 1, 2016 (Figure 1). The boom at all locations was removed on November 5, 2016 after the pipeline was repaired and no longer a threat to the Cahaba River. Boom Location 1 was in Shelby County while Boom Locations 2 and 3 were in Bibb County. These boom locations are part of Unit 13<sup>2</sup>, under 69 CFR 40084 that encompasses the Cahaba River and tributaries, in Jefferson, Shelby, and Bibb Counties, Alabama. Unit 13 extends from U.S. Route 82 to U.S. 143 (Jefferson County Road).

### 2.1 Action Details – Boom Deployment and Retrieval

Boom was deployed using a flat-bottom 12-14 foot Jon Boat at each location. The draft of a flat-bottom Jon boat in this length range is about 3-5 to 8-10 inches, depending on load weight. The width of a 14 foot Jon Boat is about 36 inches<sup>3</sup>. Deployment consisted of staking the boom on one side of the river, and via boat, laying the containment boom (18 inches in vertical size with approximately 6-inches floating on the surface and a 12-inch skirt positioned vertically down in the water column; Attachment II, Photos 1 and 2) across the river angled with the river current. Additionally, in some cases, absorbent boom was laid along the containment boom, with both booms staked together on the opposite bank. Absorbent boom floats on the water surface. The time (in the water) to deploy the boom for each set at each location was less than 2 hours.

The booms were deployed and retrieved at Locations 1 and 2 by HEPACO, a Colonial retained oil spill removal organization (OSRO), under the direction of Colonial emergency response personnel. SWS, another Colonial retained OSRO, deployed and removed the boom at Location 3 under the direction of Colonial emergency response personnel. Boom at these three locations was retrieved by pulling the boom from the shoreline up onto the shore either by hand or using a truck, to minimize workers physically walking in the river. The time to retrieve the boom took about 1 hour at each site, but generally varied in proportion to the length of the boom as the booms were examined for the presence of attached snails. Per direction from the USFWS (Andy Ford during the November 4, 2016 site visit) to EPS, Inc. (Joseph Nicolette and Kirk Kessler), any snails found attached to the boom were to be gently removed and placed back safely into the river. EPS, Inc. conveyed this information to Colonial and the OSROs that same day.

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<sup>2</sup> Unit 13 encompasses 124 km (77 mi) of river channel in Alabama, including: Cahaba River, 105 km (65 mi) extending from U.S. Highway 82, Centerville, Bibb County, upstream to Jefferson County Road 143, Jefferson County, Alabama.

<sup>3</sup> <http://www.academy.com/shop/pdp/alumacraft-14-flat-bottom-jon-boat>

## **2.2 Measures Implemented to Avoid, Reduce, or Eliminate Adverse Effects to Protected Species or Critical Habitat**

Colonial representatives providing oversight of boom deployment and retrieval operations have been trained on the environmental sensitivity of this specific area of the Cahaba River (*i.e.*, the areas where boom was placed as part of the CR251 incident), including actions that should be taken to minimize impacts of any containment or countermeasures that would be required in the Cahaba River or associated tributaries. For example, EPS, Inc. provided direction to Colonial emergency response personnel to limit disturbance in the river via foot traffic and boat deployment during any in-river operations. This education included a September 2015 spill drill conducted specifically in this area of the Cahaba River, as well as education during the emergency response in September 2016 for the CR91 incident. This education incorporated information provided through various communications between the USFWS (Andy Ford), EPS Inc. (Joseph Nicolette), and Colonial (multiple personnel) on the sensitivity of various species in the Cahaba River.

During the CR251 response, Colonial emergency response personnel overseeing boom deployment and retrieval activities received general instruction to eliminate or minimize physical actions (*i.e.*, walking in the river, deploying boats, etc.) where possible that could potentially disturb listed mussel, snail, or fish species in sensitive areas of the Cahaba River or associated tributaries. USFWS (Andy Ford, November 4, 2016) instructed EPS, Inc. (Joseph Nicolette and Kirk Kessler) to discuss with Colonial, the need to minimize impacts to any snails that may be attached to the boom when they were retrieved and to gently remove any attached snails and place them back into the water. These instructions were communicated by EPS, Inc. to Colonial (John Wyatt and John Wickersham) and David Butler (the Cahaba Riverkeeper). David Butler supported the boom retrieval efforts at Boom Locations 2 and 3. Photographs of this effort are provided in Attachment III.

# **3 ACTION AREA**

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## **3.1 Overview**

For determining whether a species or critical habitat “may be present,” it is necessary to delineate the “Action area.” The “Action area” is defined as all areas that may be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. It encompasses the geographic extent of environmental changes (i.e., the physical, chemical and biotic effects) that will result directly and indirectly from the action. The Action area is typically larger than the area directly affected by of the action. However, for the CR251 boom deployment and retrieval action, the area affected by the boom deployment and retrieval actions is limited as the actions did not affect the physical habitat or the chemical characteristics of the habitat. The potential for biotic effects is discussed further in the Effects Analysis section of this document.

## **3.2 Site Specific Action Area**

The Action area at each site is mainly constrained to shallow areas less than 1 foot (i.e., where the boom skirt or boat might contact the habitat) and with lesser potential impacts associated up to a 2-foot depth (if the boat was walked to this depth prior to embarking across the river (this is a site-by-site consideration) as the depth profiles varied between the sites (see the Effects Analysis section). The Action area was also constrained to a limited width (approximately 3 feet) along the direction of the boom transect. That is, the deployment and retrieval actions moved along the boom transects with little need to vary from this trajectory.

## **3.3 Species Evaluation**

The purpose of this section is to identify listed or proposed species that “may be present” in the Action area as well as any designated critical habitat in the Action area. To determine what species may be present in the Action area, we first identified those listed species present in Shelby and Bibb Counties, then modified these species by area specific information where available.

### 3.3.1 Listed Species in Shelby and Bibb Counties

Per the USFWS, listed species in Shelby and Bibb Counties are presented in Attachment IV (USFWS 2017a and b) and includes mussels, snails, and fish. It should be recognized that the listed aquatic species associated with the Cahaba River are a subset of those provided in the county list.

### 3.3.2 Critical Habitat in the Cahaba River

Critical habitat is a term defined and used in the Endangered Species Act. It references specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Critical habitats associated with the Cahaba River are listed for both Shelby and Bibb Counties (USFWS 2011; 2017c). Based on discussions with Andy Ford (USFWS), the designated critical habitat in the Cahaba River (for both Shelby and Bibb counties) is associated with those mussel species (Personal Communication Andy Ford 2017) listed in Table 1.

**Table 1. Critical Habitat in Bibb and Shelby Counties**

<i>Epioblasma othcaloogensis</i> , Southern acornshell
<i>Pleurobema perovatum</i> , Ovate clubshell
<i>Pleurobema decisum</i> , Southern clubshell
<i>Epioblasma metastriata</i> , Upland combshell
<i>Ptychobranchus greenii</i> , Triangular kidneyshell
<i>Medionidus acutissimus</i> , Alabama moccasinshell
<i>Hamiota perovalis</i> , Orange-nacre mucket
<i>Hamiota altilis</i> , Fine-lined pocketbook

### 3.3.3 Habitat Characteristics

A varying amount of habitat information was available for each species and therefore, web addresses are provided to follow-up for additional information.

*Epioblasma othcaloogensis*, Southern acornshell

- The preferred habitat for this species is poorly documented. However, it has been collected from medium to large rivers with moderate current and gravel or sand substrates.

<http://www.iucnredlist.org/details/7877/0>

*Pleurobema perovatum*, Ovate clubshell

- Little habitat information is available, although it has been collected in stretches of the Conasauga River where the normal depth is about one to two feet and where there is moderately strong current and a substrate composed of coarse sand and gravel. The species occurred in riffles, runs and shoals of both small creeks and rivers. The species was a short-term brooder and was gravid during late spring and summer. With the species now being presumed extinct, the fish larval hosts are unknown, but some species of *Pleurobema* use fish of the Cyprinidae family.

<http://www.iucnredlist.org/details/17689/0>

*Pleurobema decisum*, Southern clubshell

- The southern clubshell inhabits high-quality lotic (living in actively moving water) habitats with stable gravel and sandy-gravel substrates. Little else is known about its habitat requirements.

<http://www.encyclopedia.com/environment/science-magazines/southern-clubshell>

*Epioblasma metastriata*, Upland combshell

- It has been in shoals in rivers and large streams, above the fall line, on stable substrates in moderate to swift currents.

[http://explorer.natureserve.org/servlet/NatureServe?searchName=Epioblasma+metastriat  
a](http://explorer.natureserve.org/servlet/NatureServe?searchName=Epioblasma+metastriata)

*Ptychobranchus greenii*, Triangular kidneyshell

- This species appears most prevalent in sections of river three feet in depth and having a good current and a firm substrate as opposed to coarse gravel and sand, specifically in shoals and runs of small rivers and large streams.

<http://www.iucnredlist.org/details/18825/0>

*Medionidus acutissimus*, Alabama moccasinshell

- This species is usually found in sand on the margins of streams with a typical sand and gravel substrate in clear water of moderate flow in small to large rivers.

<http://eol.org/pages/449331/details#habitat>

*Hamiota perovalis*, Orange-nacre mucket

- The orangenacre mucket inhabits high quality lotic (living in actively moving water) habitats with stable gravel and sandy-gravel substrates. Little else is known about the habitat requirements of this species.

<http://www.encyclopedia.com/environment/science-magazines/orangenacre-mucket>

*Hamiota altilis*, Fine-lined pocketbook

- Historically, this species was found in large rivers to small creek habitats. It generally occupies creeks and smaller rivers. It is typically found in areas with at least some current, though usually not in swift current, and substrates of sand and mixtures of sand and gravel without heavy silt accumulations; yet, it has been found associated with swift-flowing riffles and gravel-cobble substrates in the Conasauga River. Recently, it has been found in stable sand and in gravel in small streams above the Fall Line.

<http://www.iucnredlist.org/details/11250/0>

### 3.3.4 Recent Site Specific Information on Listed Species

This section presents recent (2004-present) site specific information and data collected regarding fish, mussel, and snail species in the Cahaba River near the three boom locations. A variety of physical, chemical and biological studies have been conducted in the Cahaba River System for decades. A preliminary list of data sources addressing the Cahaba River System is provided in Attachment V (as provided by the USFWS). Most of the site specific available data were associated with Boom Locations 1 and 2.

#### 3.3.4.1 Fish Species

The Goldline darter and the Cahaba shiner are two listed fish species that have been identified in the Cahaba River and Shades Creek (Bibb County) based upon field survey information provided by the USFWS (Andy Ford, Shades\_Cahaba\_IBI.xlsx, Attachment VI). The surveys show that both species were collected in 2004 in both Shades Creek (near Boom Locations 1 and 2) and the Cahaba River, while in 2016 (one sampling event), only the Cahaba shiner was identified during the Cahaba River sampling event.

In a 2008 survey (CCR 2008), no federally listed fish were collected as part of the fish sampling efforts. The authors stated that the presence of the Cahaba shiner and the Goldline darter in the area appears unlikely or highly infrequent.

### 3.3.4.2 Mussels and Gastropods

Mussel and Gastropod surveys have been conducted over a significant period in the Cahaba River Basin, primarily since the early 1900's (Attachment VII, as provided by the USFWS).

#### *Listed Mussels and Snails: Boom Location 1 (Canoe Launch Area) and 2 (Take-Out Area):*

A survey was conducted at Boom Locations 1 and 2 in 2008 (CCR 2008) and a second survey focused on Boom Location 1 in 2009 (Geological Survey of Alabama 2009). Both surveys include data from Boom Location 1 (canoe launch), but were limited to the area immediately adjacent to the canoe launch (*i.e.*, the area where deployment/shoring of canoes associated with the launch area would most likely affect river bottom habitat). They did not include the shoals or mid-channel habitats, only a small area along the left descending bank. They recorded two listed snail species (the round rocksнail and the cylindrical lioplax), and a relic shell of the listed triangular kidneyshell (misidentified in the 2008 survey as southern clubshell; personal communication with Andy Ford, USFWS). The listed snail species ranged from 5.1 to 6.9% of the total number of snails collected during the 2008-2009 surveys near Boom Location 1 (CCR 2008, Geological Survey of Alabama 2009). The 2008 survey also included the tributary at Boom site 2 (canoe takeout). No listed species were found in this tributary during that survey.

Additionally, no federally protected mussels were found in the area during this survey. However, in September of 2008, the triangular kidneyshell and the finelined pocketbook were identified by the USFWS (Personal Communication, Andy Ford) at locations upstream and downstream of Boom Location 1 (Attachment VIII, Photo's 1 and 2).

Boom Location 2 is near Marvel Slab (Lat.  $33^{\circ} 09' 56''$ , Long.  $-87^{\circ} 01' 48''$ ). This location was a former bridge across the Cahaba River. The bridge, which functioned as a "low-head" dam, was removed in 2004. Staff from the USFWS, Alabama Department of Conservation and Natural Resources (ADCNR). The Nature Conservancy (TNC) and other scientists observed the following fish and mollusks protected by the Endangered Species Act near the Marvel Slab prior to removal: Cahaba shiner, Goldline darter, Finelined pocketbook, Round rocksнail, and Cylindrical lioplax. The Triangular kidneyshell and Flat pebblesnail were observed in suitable habitat within 3 river miles upstream of Marvel Slab (Nature Conservancy 2011). After the removal of the dam, site monitoring has been conducted during the period from 2005 to 2010 (Nature Conservancy 2011). These surveys included the following listed snail species: Round rocksнail, Cylindrical lioplax, and the listed mussel, Finelined pocketbook.

#### *Listed Mussels and Snails: Boom Location 3*

The USFWS identified the Round rocksнail at Boom Location 3 on November 4, 2016 (Attachment VIII, Photo's 3 and 4).

### **3.4 Species That May be in the Area**

Observations, densities, and abundance information related to listed mussels, snails, and fish identified during the referenced recent sampling and site reconnaissance efforts are provided in Table 2. As such, listed species that may occur near the boom location Action areas are provided in Table 3.

**Table 2. Site specific observations and surveys of listed species near Boom Locations 1, 2 and 3.**

Recent Survey or Observational Information	CCR Environmental Inc., and USFWS Observations	Geological Survey of Alabama	USFWS Shades Creek IBI Data and Nature Conservancy	The Nature Conservancy <sup>9</sup>						USFWS Observations or USFWS Shades Creek IBI Data
<b>Boom Site Location &gt;</b>	Vicinity of Canoe Launch Area (Boom Location 1)	Vicinity of Canoe Launch Area (Boom Location 1)	Vicinity of Boom Location 2 or within several miles of Marvel Slab	Vicinity of Boom Location 2						USFWS snail observation near Boom Location 3; USFWS Shades Creek IBI Data near Boom Locations 1 and 2
<b>Year &gt;</b>	2008	2009	2004	2005	2006	2007	2008	2009	2010	2016
<b>Mussels <sup>13</sup></b>										
Total Number per Square Foot (#/ft <sup>2</sup> )	0.127	0.188		0.070	0.061	0.094	0.144			
Federal Listed (T or E) % of Catch	0%	0%		3.7% <sup>2,8,10</sup>	4.0% <sup>2,8</sup>	0% <sup>10</sup>	0%	0% <sup>10</sup>		
Incidental Observation	Yes <sup>1,2</sup>		Yes <sup>1,2</sup>	Yes <sup>2,10</sup>		Yes <sup>2,10</sup>		No <sup>10</sup>	Yes <sup>2,10</sup>	
<sup>1</sup> <i>Ptychobranchus greenii</i> , Triangular kidneyshell - Endangered										
<sup>2</sup> <i>Hamiota altilis</i> , Finelined pocketbook - Threatened										
<b>Snails</b>										
Total Number per Square Foot (#/ft <sup>2</sup> )		41.4	6.3	5.4	6.8	141.5	102.7			
Federal Listed (T or E) % of Catch		4.0% <sup>3</sup> 1.1% <sup>4</sup>	5.8% <sup>3</sup> 1.1% <sup>4</sup>	18.85% <sup>3</sup> 1.83% <sup>4</sup>	12.64% <sup>3</sup> 3.62% <sup>4</sup>	8.07% <sup>3</sup> 0.46% <sup>4</sup>	26.59% <sup>3</sup> 1.02% <sup>4</sup>			
Incidental Observation	Yes <sup>3,4</sup>		Yes <sup>7</sup>				Yes <sup>3,4</sup>			Yes <sup>3,12</sup>
<sup>3</sup> <i>Leptoxis ampla</i> , Round rocksail - Threatened										
<sup>4</sup> <i>Lioplax cyclostomaformis</i> , Cylindrical lioplax - Endangered										
<sup>7</sup> <i>Lepryium showalteri</i> , Flat pebblesnail - Endangered										
<b>Fish - Federally Listed</b>										
Incidental Observation	Yes <sup>5,6</sup>									Yes <sup>6,11</sup>
<sup>5</sup> <i>Percina aurolineata</i> , Goldline darter - Threatened										
<sup>6</sup> <i>Notropis cahaba</i> , Cahaba shiner - Endangered										
<sup>8</sup> represents one individual										
<sup>9</sup> includes quantitative collections and incidental observations from qualitative timed mussel surveys										
<sup>10</sup> indicates that timed qualitative survey was conducted										
<sup>11</sup> Near Boom Locations 1 and 2										
<sup>12</sup> Near Boom Location 3										
<sup>13</sup> Although not identified in the studies referenced in this table, recent USFWS agency records indicate that <i>Pleurobema decisum</i> , Southern clubshell and <i>Hamiota perovalis</i> , Orange-nacre mucket may also be in the general area of the Boom Locations.										

**Table 3. Based on site specific observations, surveys, and recent agency records, the following listed species may be present near the Boom Locations.**

Mussels
<i>Ptychobranchus greenii</i> , Triangular kidneyshell - Endangered
<i>Hamiota altilis</i> , Finelined pocketbook - Threatened
<i>Pleurobema decisum</i> , Southern clubshell - Endangered
<i>Hamiota perovalis</i> , Orange-nacre mucket - Threatened
Snails
<i>Leptoixis ampla</i> , Round rocksail - Threatened
<i>Lioplax cyclostomaformis</i> , Cylindrical lioplax - Endangered
<i>Lepyrium showalteri</i> , Flat pebblesnail - Threatened
Fish
<i>Percina aurolineata</i> , Goldline darter - Threatened
<i>Notropis cahabae</i> , Cahaba shiner - Endangered

# **4 EFFECTS ANALYSIS**

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## **4.1 Types of Possible Impacts**

Based upon discussions and review of the three boom sites in the field with the USFWS (Andy Ford, during the November 4, 2016 site visit), it was determined by the USFWS that federally listed fish would likely not be affected by the boom deployment or retrieval actions. As described in Section 3.2, the Action area is relatively narrow and restricted in depth, and the time spent in the river was limited.

Since listed mussel and snail species are potentially located in parts of the Action areas, possible impacts that could occur would be:

- disturbance or mortality to mussels or snails associated with walking in the river nearshore (i.e., when deploying a boat);
- disturbance or mortality if the boat, an oar, or the boom itself scraped a rock while in the river or during deployment and retrieval of boom; or
- disturbance of snails if they attached themselves to the boom skirts (once the boom was in place, there was the potential that snails where present in the habitat where the boom skirt touches the habitat, could climb up and attach to the boom skirt). As noted earlier, any attached snails were gently removed and placed back into the river per USFWS direction as the boom was retrieved.

## **4.2 Incidental Take Statement**

USFWS's jeopardy determination and incidental take statement is based on the potential effect that the action could have on the applicable protected resources. In this regard, based upon the size of the Action areas at each boom location (Figures 2A-2E), and using the average density and presence of threatened and endangered species comprising these densities (Table 2), we attempted to bound the potential number of mussels and snails that may have been affected within the Action area at each boom location (Tables 4 and 5, respectively).

**Table 4. Bounding the number of listed mussels that may have been affected within the Action area.**

Boom Location	Area < 1 Foot Depth (ft <sup>2</sup> ) <sup>2</sup>	Area > 1 and < 2 Foot Depth (ft <sup>2</sup> ) <sup>2</sup>	Average Density of Mussels (#/ft <sup>2</sup> )	Average % of T&E Mussel Species (%)	Estimated number of listed mussels that may have been in Action Area <sup>4</sup>	Bounding the number of listed mussels that may have been affected within the Action Area <sup>4</sup>
1 (Upstream) <sup>1</sup>	330	75	0.158	1.00%	0.6	<0.6
1 (Downstream) <sup>1</sup>	180	150	0.158	1.00%	0.5	<0.5
2	105	180	0.092	1.54%	0.4	<0.4
3 (Upstream) <sup>3</sup>	45	45	No data	No data	0.1	<0.1
3 (Downstream) <sup>3</sup>	315	60	No data	No data	0.5	<0.5
Totals					2.2 <sup>4</sup>	<2.2 <sup>4</sup>
<sup>1</sup> 2008 and 2009 surveys did not identify any threatened or endangered mussel species (Table 2). However, incidental observations of threatened or endangered mussel species were made by the USFWS. Therefore, the % of mussel species associated with the density was assigned a value of 1%						
<sup>2</sup> Assumes a width of 36 inches, same as 14' Jon boat width						
<sup>3</sup> No mussel data were available associated with Boom Location 3. We therefore used the density and % presence of T&E mussels associated with the closest Boom Location (Location 2)						
<sup>4</sup> The densities of mussels were based upon the observational surveys conducted, which focused generally on mussels that were observed on the sediment surface. It is likely that the density of mussels is higher than that recorded as some species and individuals would have been buried and not accounted for in the density estimates. However, potentially affected mussels are expected to be minimal given the efforts made to minimize impacts during boom placement and retrieval (see Section 4.3), the types of potential impacts that could occur (Section 4.1), not all mussels in the Action area would have been affected, and the relatively low density of mussels expected in the Action area.						

**Table 5. Bounding the number of listed snails that may have been affected within the Action area.**

Boom Location	Area < 1 Foot Depth (ft <sup>2</sup> ) <sup>2</sup>	Area > 1 and < 2 Foot Depth (ft <sup>2</sup> ) <sup>2</sup>	Average Density of Snail (#/ft <sup>2</sup> )	Average % of Round Rocksnail Species (%)	Average % of Cylindrical Lioplax Species (%)	Estimated number of listed Round Rocksnails that may have been in the Action Area	Estimated number of listed Cylindrical Lioplax that may have been in the Action Area	Bounding the number of Round Rocksnails that potentially may have been affected within the Action Area <sup>4</sup>	Bounding the number of Cylindrical Lioplax that potentially may have been affected within the Action Area <sup>4</sup>
1 (Upstream) <sup>1</sup>	330	75	41.4	4.0%	1.1%	671	184	<671	<184
1 (Downstream) <sup>1</sup>	180	150	41.4	4.0%	1.1%	546	150	<546	<150
2	105	180	60.1	14.4%	1.6%	2,465	276	<2,465	<276
3 (Upstream) <sup>3</sup>	45	45	No data	No data	No data	778	87	<778	<87
3 (Downstream) <sup>3</sup>	315	60	No data	No data	No data	3,243	363	<3,243	<363
Totals						7,703	1060	<7,703	<1,060

<sup>1</sup> 2008 and 2009 surveys did not identify any threatened or endangered mussel species (Table 2). However, incidental observations of threatened or endangered mussel species were made by the USFWS. Therefore, the % of mussel species associated with the density was assigned a value of 1%

<sup>2</sup> Assumes a width of 36 inches, same as 14' Jon boat width

<sup>3</sup> No mussel or snail data were available associated with Boom Location 3. We therefore used the density and % presence of T&E mussels associated with the closest Boom Location (Location 2)

<sup>4</sup> The number of potentially affected T&E snails are likely significantly less than those in the Action Area based upon the efforts made to minimize potential impacts during boom placement and retrieval (see Section 4.3), the types of potential impacts that could occur (Section 4.1), not all snails in the Action area would have been affected, and the conservatism in the analysis.

#### **4.2.1 Mussels**

In evaluating the situation at each boom location, and the limited Action area at each location, it is likely that adverse impacts to listed mussels would have been minimal based on the information in Table 2, where the densities of mussel species are low<sup>4</sup>, and the percent of the density that could be a listed species is also low. As such, listed snails would have had the highest potential to have been disturbed due to boom deployment and retrieval actions. Therefore, the following discussion focuses on snails.

#### **4.2.2 Snails**

The type of potential impacts to snails would likely be restricted to a 1-foot depth, with a lesser amount of potential impacts to occur between the 1 to 2-foot depth range. To better understand the areas where impacts had the potential to occur, a water depth profile for each of the Boom Locations was developed. These profiles, along with pictures of the boom locations, are provided in Figures 2A-2E. Note that where depths were greater than 6 feet, depth measurements were not measured as they were not necessary.

The estimated number of snails present in the Action area is presented in Table 5. Although areas where impacts could have occurred are identifiable, the magnitude of potential impacts, if any, are not measurable as they would have been limited in time and area. Based on the available information, the estimated number of snails that may have been affected are likely to be significantly less than the estimated number of snails that may have been in the Action area given the nature of the types of potential impacts (Section 4.1) and the efforts to manage potential impacts as described in Section 4.3.

### **4.3 Management of Potential Impacts**

Based upon the heightened sensitivity of the ecological resources in the Cahaba River, significant effort was made to minimize potential impacts during boom placement and retrieval. These efforts included:

- pre-incident education and planning;

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<sup>4</sup> It should be noted that the densities of mussels were based upon the observational surveys conducted, which focused generally on mussels that were observed on the sediment surface. It is likely that the density of mussels is higher than that recorded as some species and individuals would have been buried and not accounted for in the density estimates. However, potentially affected mussels are expected to be minimal given the efforts made to minimize potential impacts during boom placement and retrieval (see Section 4.3), the types of potential impacts that could occur (Section 4.1), not all mussels in the Action area would have been affected, and the relatively low density of mussels expected in the Action area.

- boom deployment and retrieval actions associated with CR251 were conducted at historically low flows in the Cahaba River. As such, boom deployment and retrieval efforts could be handled efficiently with minimal disturbance to the river (i.e., boat handling and management in the river was easily manageable);
- minimization of potential impacts by cognizant avoidance of snails if walking in the river and limiting foot traffic on the rocky areas;
- since there was no spilled product in the Cahaba River, this limited the need to remove/replace boom on a regular basis, thus further limiting foot and boat traffic;
- since there was no need to physically tend the boom in the river daily and hence, foot and boat traffic were limited to the initial deployment and retrieval at each of the sites (exposure times to boat and/or foot traffic were limited).
- During boom retrieval, and snails attached to the boom were gently removed and placed back into the water.

# 5 CONCLUSIONS AND DETERMINATION OF EFFECTS

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In evaluating the boom deployment and retrieval operations at each site and considering the advanced education in regards to the environmental sensitivity of the Cahaba River; the limited Action area; the fact that foot and boat traffic were limited to the initial deployment and retrieval actions at each of the sites (*i.e.*, limited time in the river); and that boom retrieval included the evaluation of pulled boom to care for attached snails, potential impacts to listed species are expected to be minimal.

## 5.1 Finding

Based upon the information provided in this Biological Assessment, our determination and finding is that the boom deployment and retrieval actions that were conducted as part of the emergency response are as follows:

**Fish** - "*May affect, but are not likely to adversely affect*" listed fish species in the Cahaba River.

- "*May affect, but not likely to adversely affect*" means that all effects are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the impact and include those effects that are undetectable, not measurable, or cannot be evaluated. Discountable effects are those extremely unlikely to occur.

**Mussels and Snails** - "*May affect, and is likely to adversely affect*" listed mussel and snail species in the Cahaba River.

- "*May affect, and is likely to adversely affect*" means that listed resources are likely to be exposed to the action or its environmental consequences and will respond in a negative manner to the exposure.

As stated earlier, the "Finding" categories described above address the chance or potential that an "individual" may be affected given the action. We are requesting that the USFWS concur with our finding and provide a final Biological Opinion to the USEPA with an incidental take statement that includes an exemption for the incidental take that may have occurred during the emergency response.

## **6 LITERATURE CITED**

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CCR Environmental, Inc. 2008. Protected Species Survey Report, Living River Retreat Property, Bibb and Shelby Counties, Alabama. 31 pp.

Geological Survey of Alabama 2009. Summary of relocation effort of freshwater mussels and federally listed snails in the Cahaba River. December 14, 2009, 11 pp.

Nature Conservancy 2011. Monitoring freshwater mussels and snails at a habitat restoration site associated with a low-head dam removal on the Cahaba river, Bibb county, Alabama, 2005-2010

Personal Communication 2017. Phone conversation with Andy Ford, Fish and Wildlife Biologist with the USFWS Alabama Ecological Services Field Office, February 22, 2017

USFWS 2011. Alabama Critical Habitats, Alabama Ecological Services Field Office, <https://www.fws.gov/daphne/es/specieslst.html>, Last updated: April 27, 2016, Accessed February 22, 2017

USFWS 2017a. ECOS Environmental Conservation Online System, Alabama's Federally Listed Species. <http://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=01117> - Accessed February 22, 2017, Shelby County

USFWS 2017b. ECOS Environmental Conservation Online System, Alabama's Federally Listed Species. <http://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=01007> - Accessed February 22, 2017, Bibb County

USFWS 2017c. Critical Habitat for Threatened & Endangered Species, ECOS <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77> - Accessed February 22, 2017

## **7 LIST OF CONTACTS MADE AND PREPARERS**

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### Contacts:

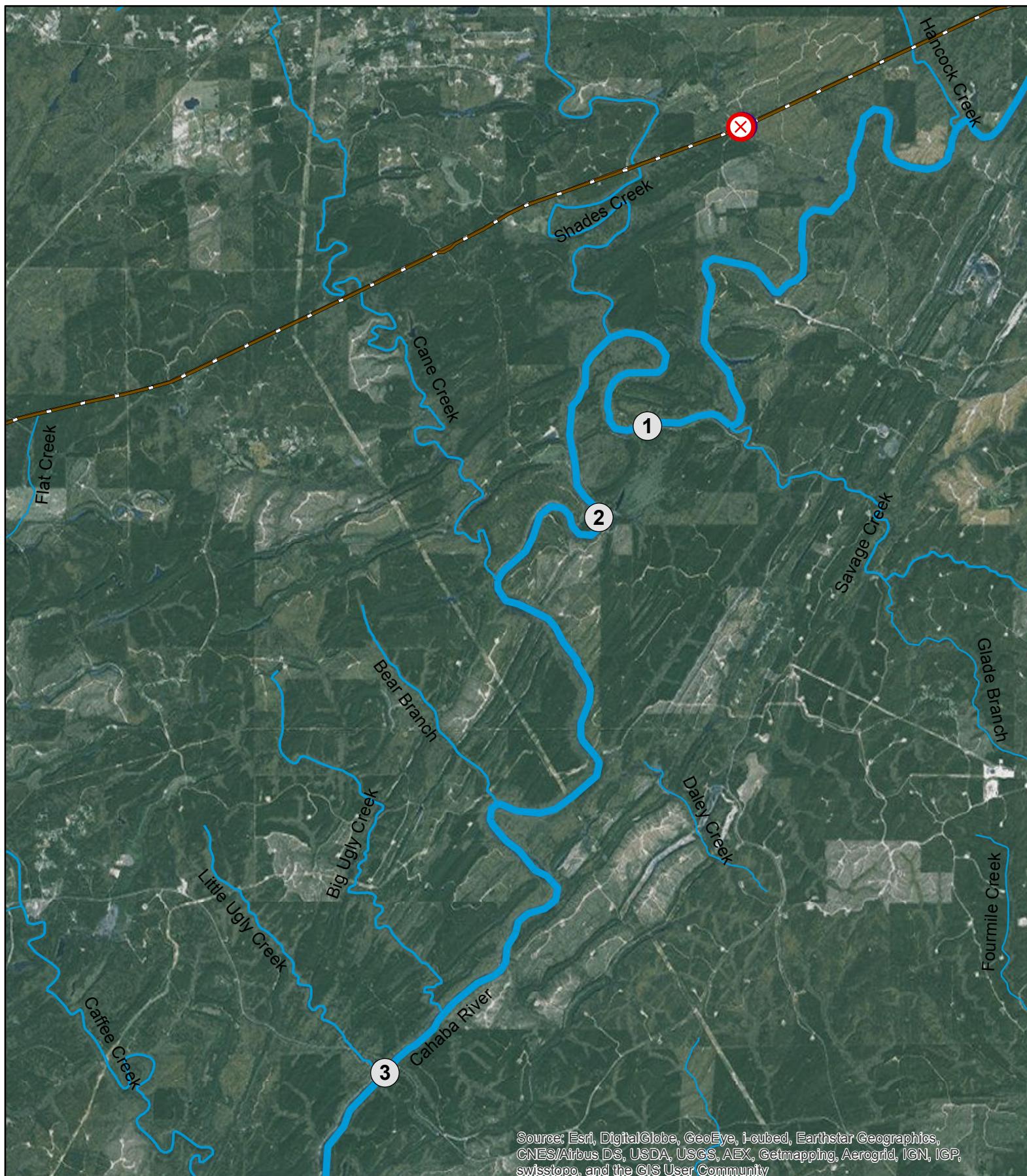
Anthony "Andy" Ford  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
Alabama Ecological Services Field Office  
1208-B Main Street  
Daphne, AL 36526  
(251) 441-5838 (O)  
[Anthony\\_Ford@fws.gov](mailto:Anthony_Ford@fws.gov)

### Preparers:

Joseph Nicolette  
Senior Principal and Ecosystem Services Practice Leader  
Fisheries and Aquatic Biology  
1050 Crown Pointe Parkway  
Atlanta, GA 30338  
Direct: (678) 336-8554  
Cell: (678) 451-8288  
[jnicolette@envplanning.com](mailto:jnicolette@envplanning.com)

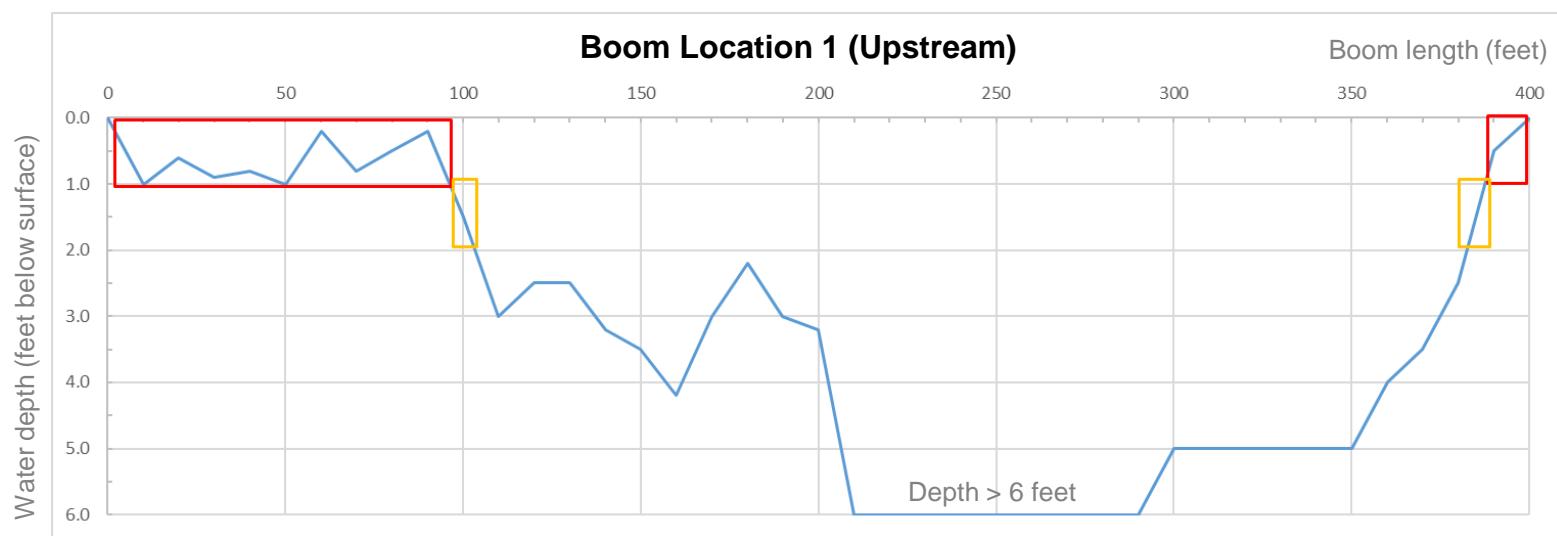
Karen Buerki  
U.S. Environmental Protection Agency  
EPA Region 4  
61 Forsyth Street SW  
Atlanta, GA 30303

## **FIGURES**



- Boom Location
- ✖ CR251 Incident Location
- Colonial Pipelines

Figure 1  
Boom Locations Along the Cahaba River



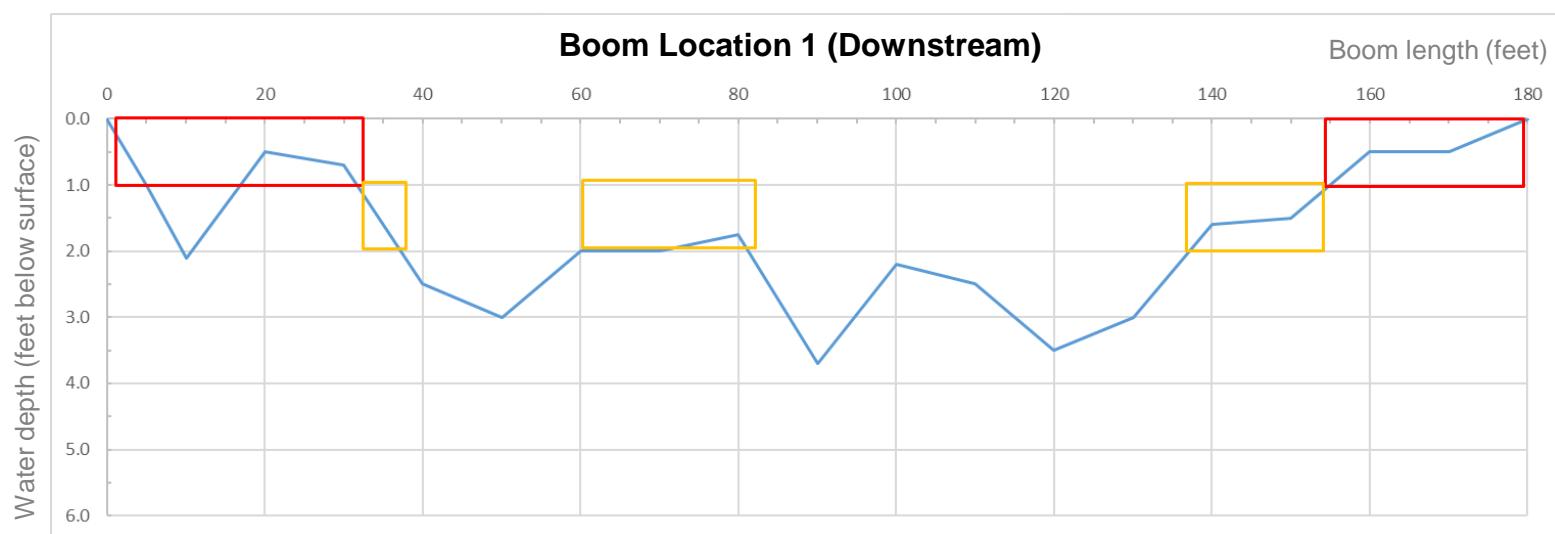
<b>Boom Length:</b>	<b>400 feet</b>
<b>Boom Skirt Depth:</b>	<b>12 inches below surface</b>
<b>Length of Transect (&lt;1ft):</b>	<b>110 feet</b>
<b>Length of Transect (1-2ft):</b>	<b>25 feet</b>



1050 Crown Pointe Pkwy  
Suite 550  
Atlanta, GA 30338  
Phone (404) 315-9113  
Fax (404) 315-8509

Colonial Pipeline Company  
CR251 Incident  
Shelby County, AL

**Figure 2A**  
**Cahaba R. Depth Profile – Boom Location 1 (upstream)**  
**Biological Assessment**



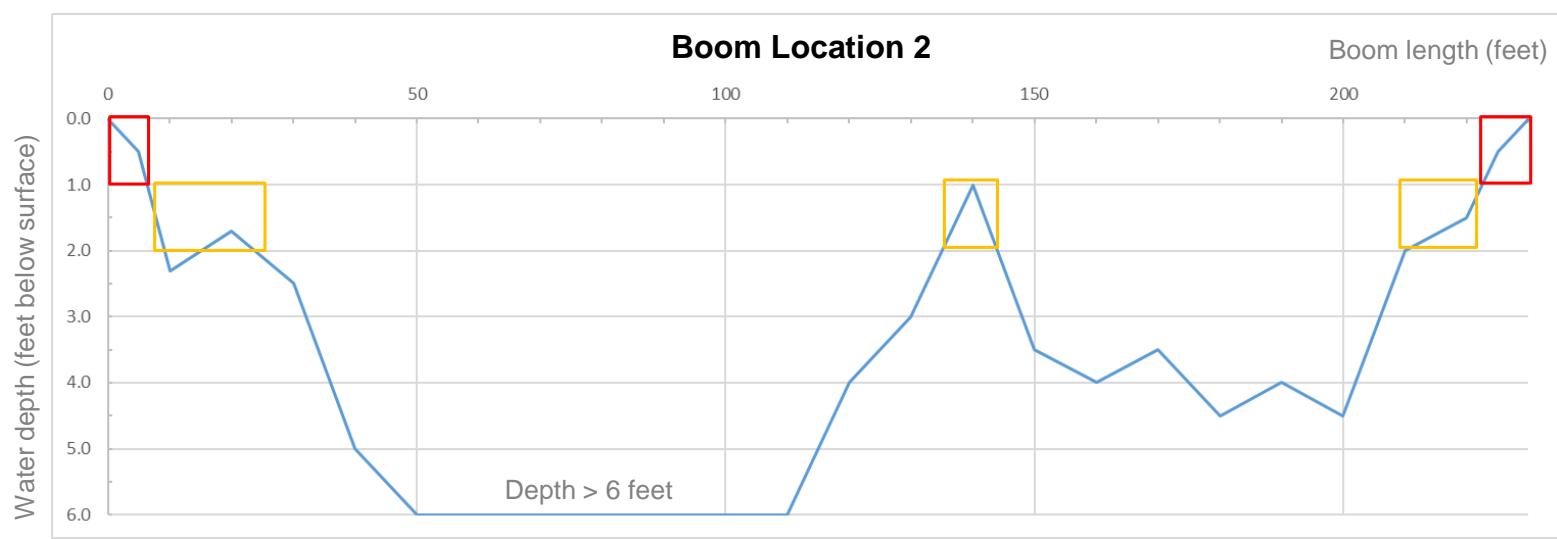
<b>Boom Length:</b>	<b>180 feet</b>
<b>Boom Skirt Depth:</b>	<b>12 inches below surface</b>
<b>Length of Transect (&lt;1ft):</b>	<b>60 feet</b>
<b>Length of Transect (1-2ft):</b>	<b>50 feet</b>



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Fax (404) 315-8509

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CR251 Incident  
Shelby County, AL

**Figure 2B**  
**Cahaba R. Depth Profile – Boom Location 1 (downstream)**  
**Biological Assessment**



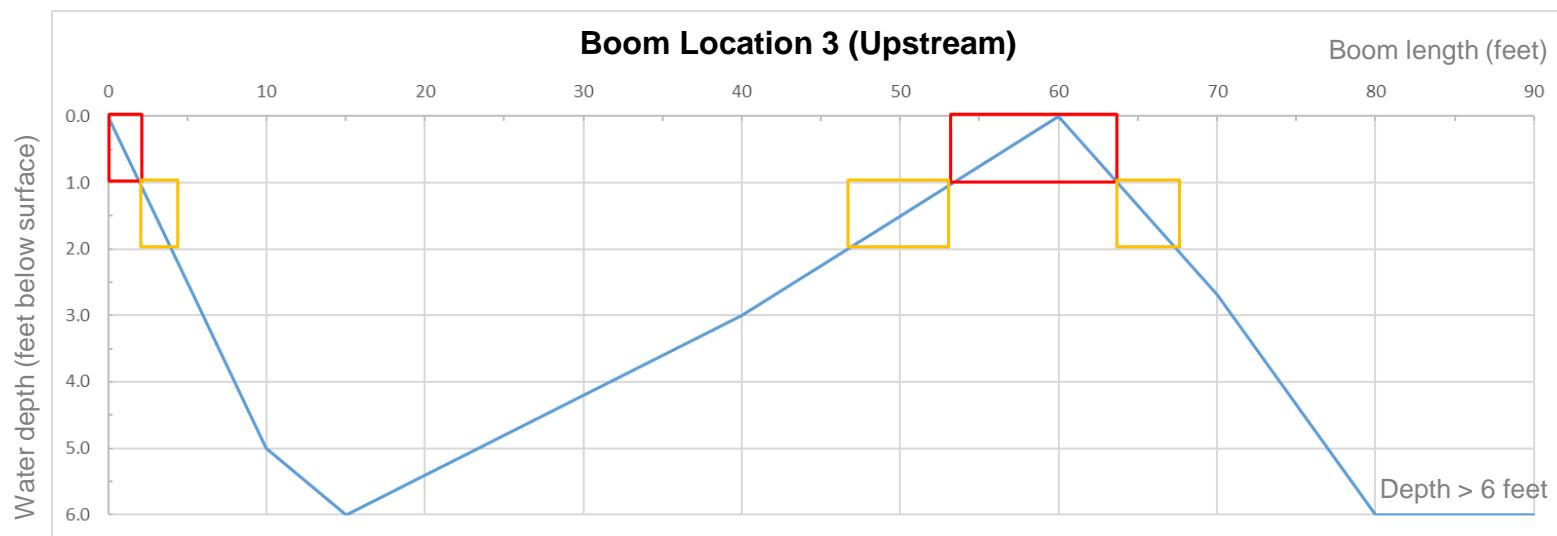
<b>Boom Length:</b>	<b>250 feet</b>
<b>Boom Skirt Depth:</b>	<b>12 inches below surface</b>
<b>Length of Transect (&lt;1ft):</b>	<b>35 feet</b>
<b>Length of Transect (1-2ft):</b>	<b>60 feet</b>



1050 Crown Pointe Pkwy  
Suite 550  
Atlanta, GA 30338  
Phone (404) 315-9113  
Fax (404) 315-8509

Colonial Pipeline Company  
CR251 Incident  
Bibb County, AL

**Figure 2C**  
**Cahaba R. Depth Profile – Boom Location 2**  
**Biological Assessment**



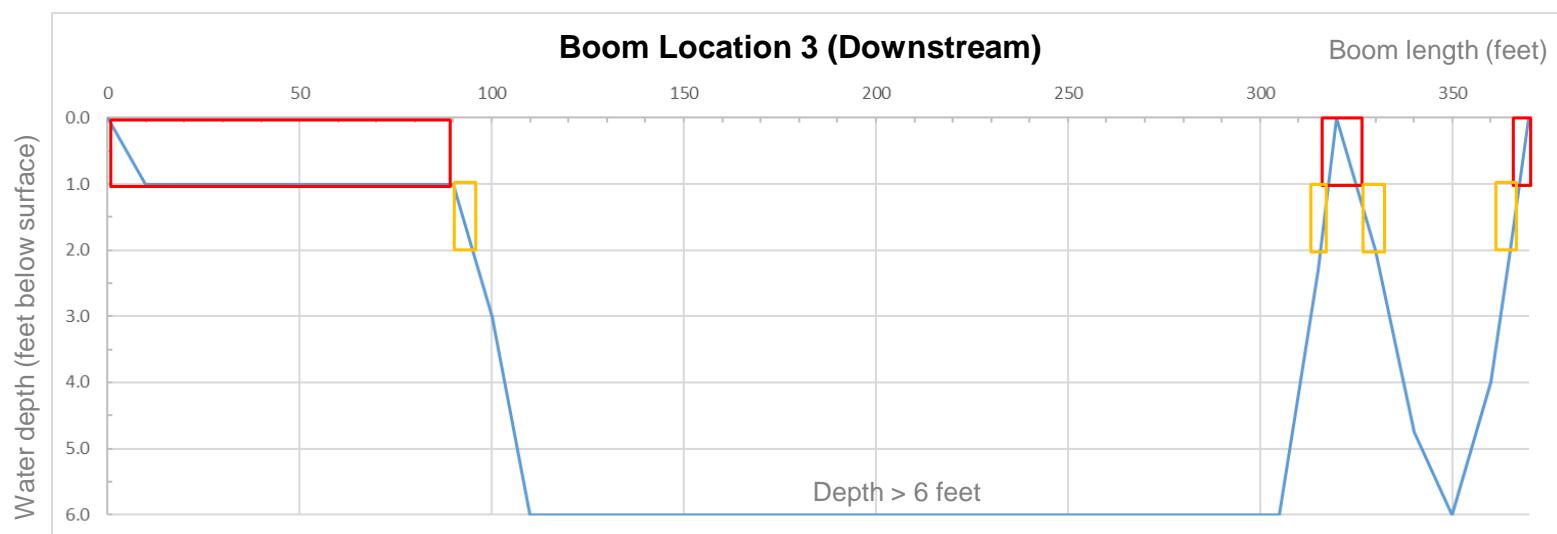
<b>Boom Length:</b>	<b>100 feet</b>
<b>Boom Skirt Depth:</b>	<b>12 inches below surface</b>
<b>Length of Transect (&lt;1ft):</b>	<b>15 feet</b>
<b>Length of Transect (1-2ft):</b>	<b>15 feet</b>



1050 Crown Pointe Pkwy  
Suite 550  
Atlanta, GA 30338  
Phone (404) 315-9113  
Fax (404) 315-8509

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CR251 Incident  
Bibb County, AL

**Figure 2D**  
**Cahaba R. Depth Profile – Boom Location 3 (upstream)**  
**Biological Assessment**



<b>Boom Length:</b>	<b>400 feet</b>
<b>Boom Skirt Depth:</b>	<b>12 inches below surface</b>
<b>Length of Transect (&lt;1ft):</b>	<b>105 feet</b>
<b>Length of Transect (1-2ft):</b>	<b>20 feet</b>



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Suite 550  
Atlanta, GA 30338  
Phone (404) 315-9113  
Fax (404) 315-8509

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Bibb County, AL

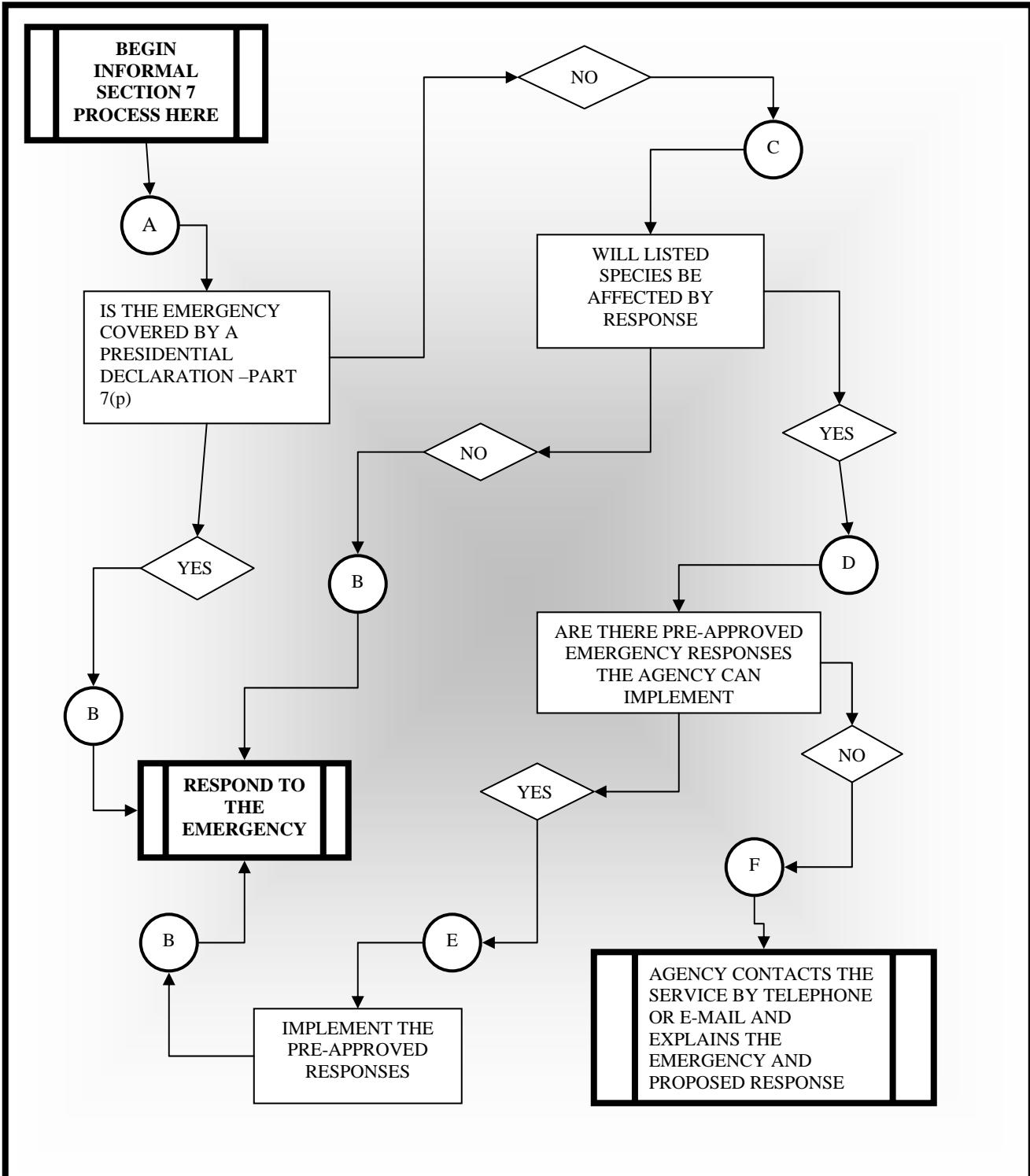
**Figure 2E**  
**Cahaba R. Depth Profile – Boom Location 3 (downstream)**  
**Biological Assessment**

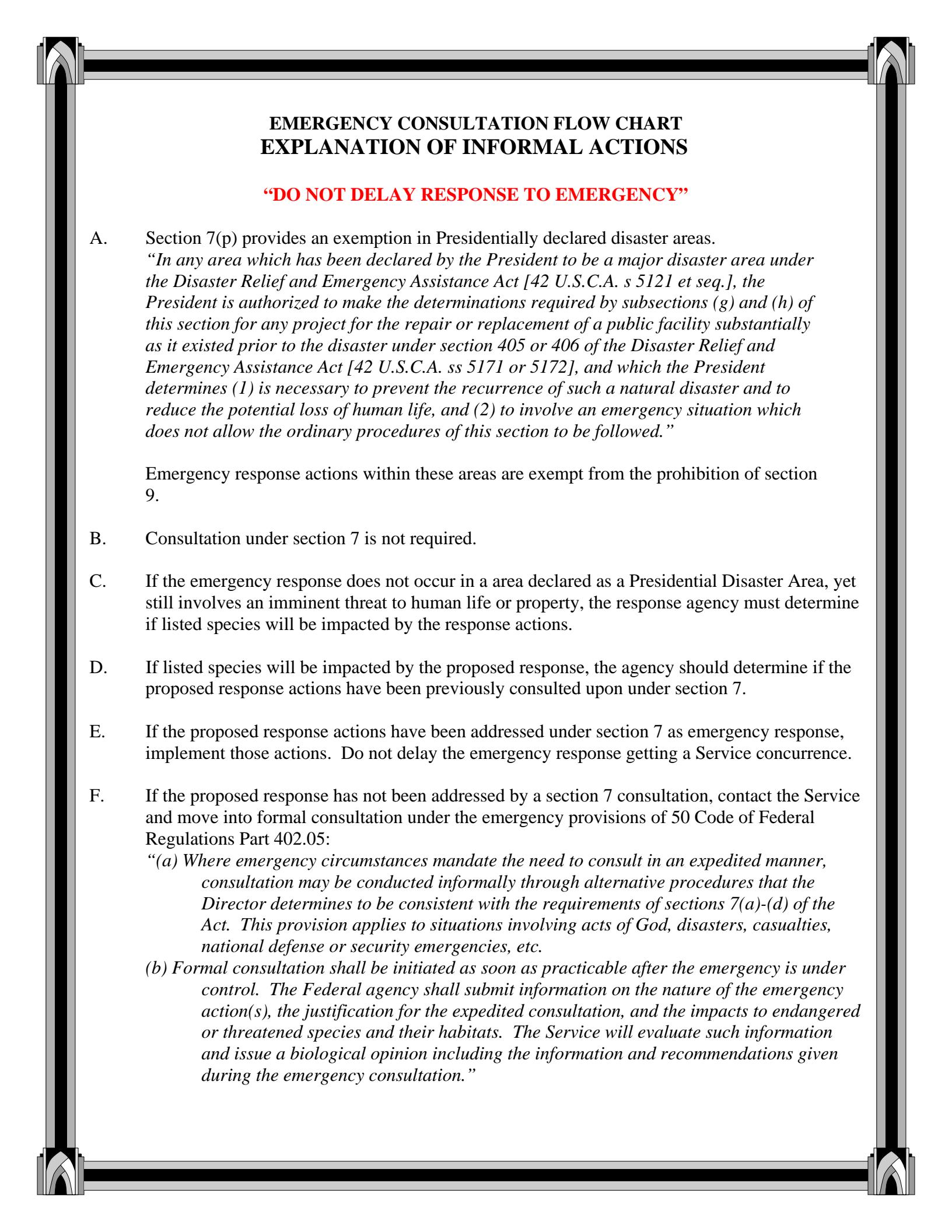
## **ATTACHMENT I**

### **Overview of the USFWS Section 7 Emergency Consultation Flow Chart**

## EMERGENCY CONSULTATION FLOW CHART

**"DO NOT DELAY RESPONSE TO EMERGENCY"**





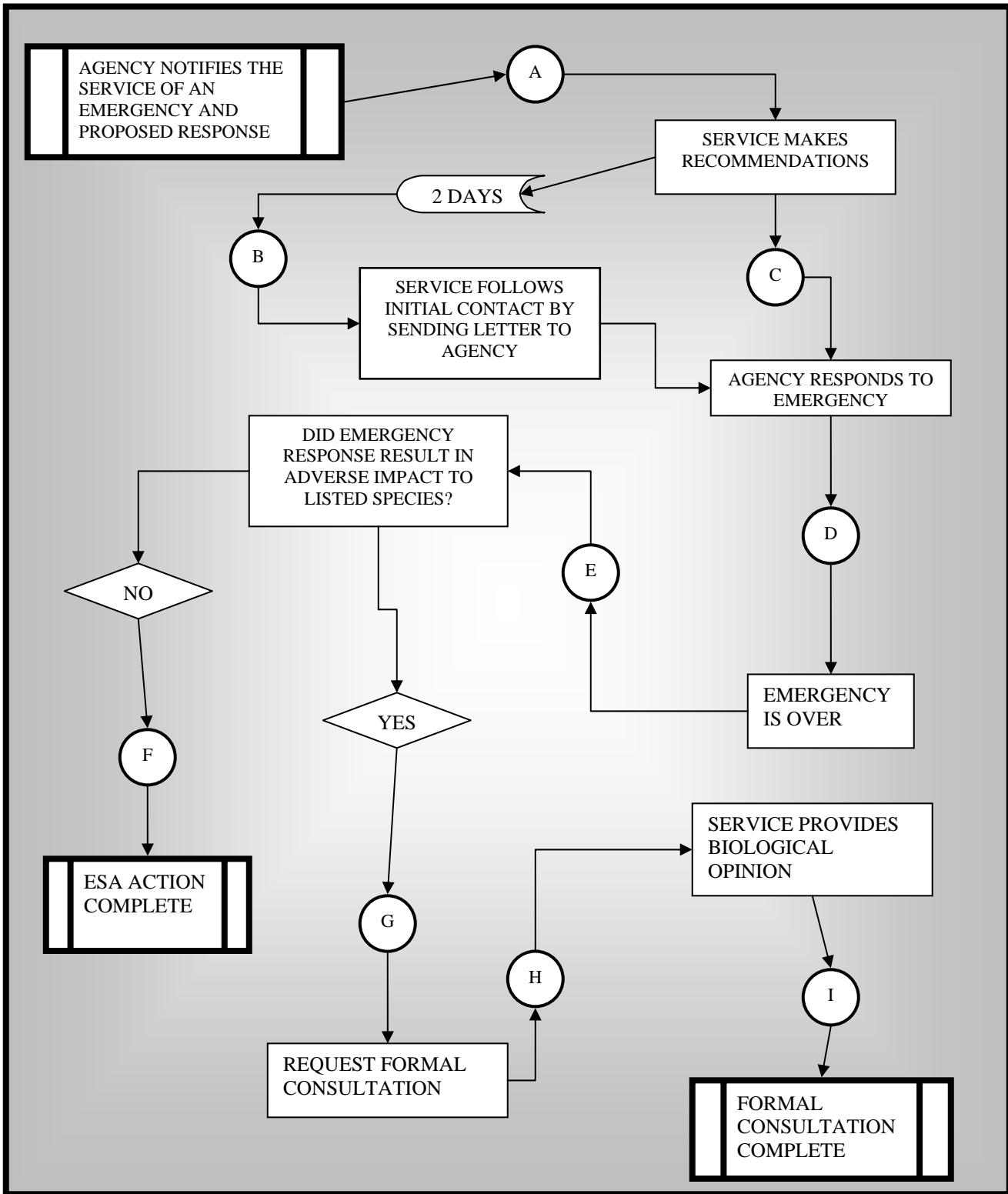
## **EMERGENCY CONSULTATION FLOW CHART EXPLANATION OF INFORMAL ACTIONS**

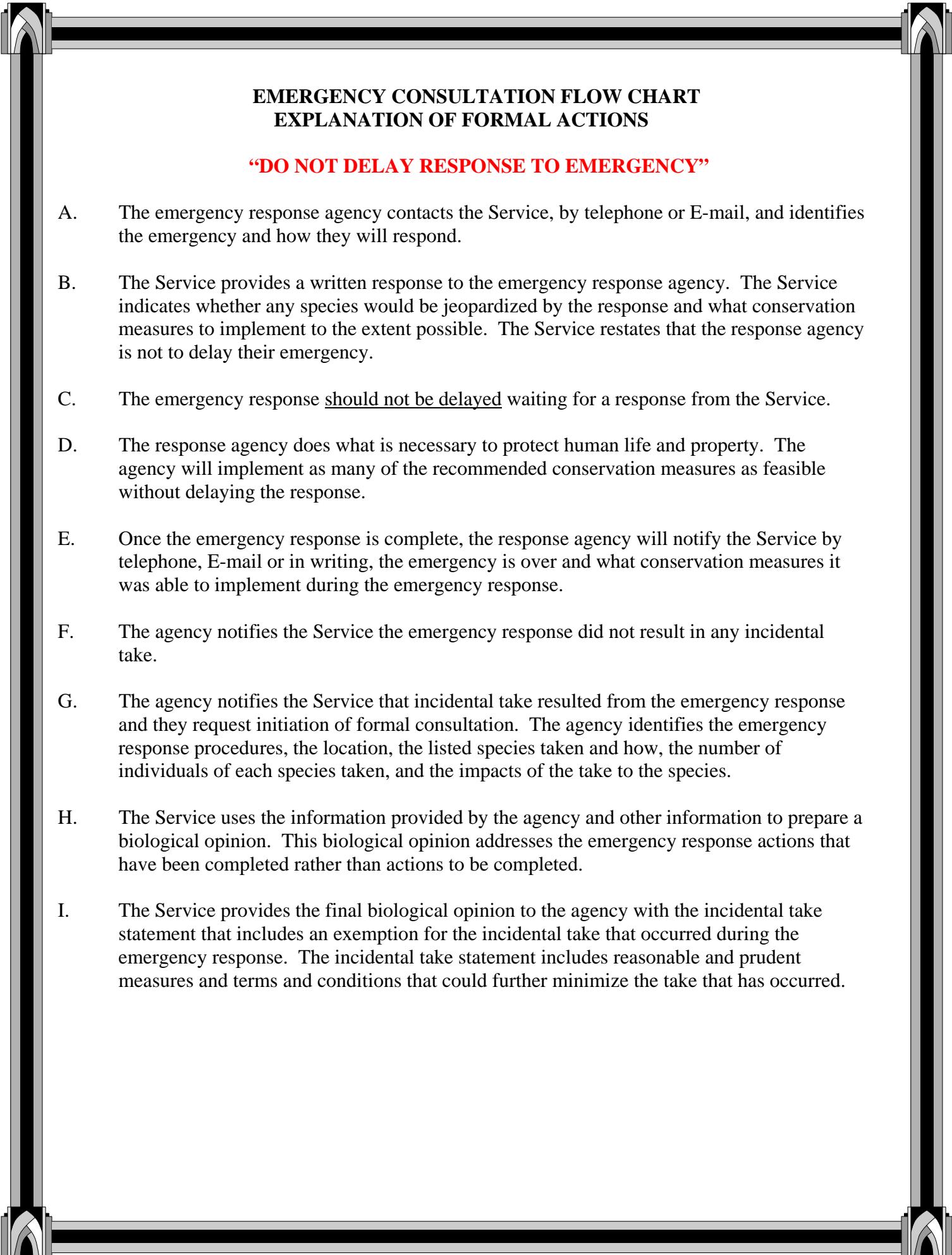
### **“DO NOT DELAY RESPONSE TO EMERGENCY”**

- A. Section 7(p) provides an exemption in Presidentially declared disaster areas.  
*“In any area which has been declared by the President to be a major disaster area under the Disaster Relief and Emergency Assistance Act [42 U.S.C.A. s 5121 et seq.], the President is authorized to make the determinations required by subsections (g) and (h) of this section for any project for the repair or replacement of a public facility substantially as it existed prior to the disaster under section 405 or 406 of the Disaster Relief and Emergency Assistance Act [42 U.S.C.A. ss 5171 or 5172], and which the President determines (1) is necessary to prevent the recurrence of such a natural disaster and to reduce the potential loss of human life, and (2) to involve an emergency situation which does not allow the ordinary procedures of this section to be followed.”*
- B. Consultation under section 7 is not required.
- C. If the emergency response does not occur in a area declared as a Presidential Disaster Area, yet still involves an imminent threat to human life or property, the response agency must determine if listed species will be impacted by the response actions.
- D. If listed species will be impacted by the proposed response, the agency should determine if the proposed response actions have been previously consulted upon under section 7.
- E. If the proposed response actions have been addressed under section 7 as emergency response, implement those actions. Do not delay the emergency response getting a Service concurrence.
- F. If the proposed response has not been addressed by a section 7 consultation, contact the Service and move into formal consultation under the emergency provisions of 50 Code of Federal Regulations Part 402.05:
  - (a) *Where emergency circumstances mandate the need to consult in an expedited manner, consultation may be conducted informally through alternative procedures that the Director determines to be consistent with the requirements of sections 7(a)-(d) of the Act. This provision applies to situations involving acts of God, disasters, casualties, national defense or security emergencies, etc.*
  - (b) *Formal consultation shall be initiated as soon as practicable after the emergency is under control. The Federal agency shall submit information on the nature of the emergency action(s), the justification for the expedited consultation, and the impacts to endangered or threatened species and their habitats. The Service will evaluate such information and issue a biological opinion including the information and recommendations given during the emergency consultation.”*

## EMERGENCY CONSULTATION FLOW CHART

**"DO NOT DELAY RESPONSE TO EMERGENCY"**





## **EMERGENCY CONSULTATION FLOW CHART EXPLANATION OF FORMAL ACTIONS**

### **“DO NOT DELAY RESPONSE TO EMERGENCY”**

- A. The emergency response agency contacts the Service, by telephone or E-mail, and identifies the emergency and how they will respond.
- B. The Service provides a written response to the emergency response agency. The Service indicates whether any species would be jeopardized by the response and what conservation measures to implement to the extent possible. The Service restates that the response agency is not to delay their emergency.
- C. The emergency response should not be delayed waiting for a response from the Service.
- D. The response agency does what is necessary to protect human life and property. The agency will implement as many of the recommended conservation measures as feasible without delaying the response.
- E. Once the emergency response is complete, the response agency will notify the Service by telephone, E-mail or in writing, the emergency is over and what conservation measures it was able to implement during the emergency response.
- F. The agency notifies the Service the emergency response did not result in any incidental take.
- G. The agency notifies the Service that incidental take resulted from the emergency response and they request initiation of formal consultation. The agency identifies the emergency response procedures, the location, the listed species taken and how, the number of individuals of each species taken, and the impacts of the take to the species.
- H. The Service uses the information provided by the agency and other information to prepare a biological opinion. This biological opinion addresses the emergency response actions that have been completed rather than actions to be completed.
- I. The Service provides the final biological opinion to the agency with the incidental take statement that includes an exemption for the incidental take that occurred during the emergency response. The incidental take statement includes reasonable and prudent measures and terms and conditions that could further minimize the take that has occurred.

## **ATTACHMENT II**

### **Photographs of containment and absorbent boom in the Cahaba River**

Photo 1. Example of Containment and Absorbent Boom in the Cahaba River.



Photo 2. Example of Containment and Absorbent Boom in the Cahaba River.



### **ATTACHMENT III**

**Photographs of boom retrieval and actions taken to minimize impacts to any snails that may be attached to the boom during retrieval**

## Boom Retrieval from the Cahaba River



## Evaluation of boom for attached snails during retrieval



**ATTACHMENT IV**

**Listed species in Shelby and Bibb Counties, Alabama**



[ECOS](#) / [Species Reports](#) / Species By County Report

## Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the [IPaC](#) application.

County: Shelby, Alabama



Need to contact a FWS field office about a species? Follow [this link](#) to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Birds	Bald eagle ( <i>Haliaeetus leucocephalus</i> )	lower 48 States	Recovery	Rock Island Ecological Services Field Office	<a href="#">Southwestern Bald Eagle Recovery Plan</a>	<a href="#">Implementation Progress</a>	Final
Birds	Bald eagle ( <i>Haliaeetus leucocephalus</i> )	lower 48 States	Recovery	Rock Island Ecological Services Field Office	<a href="#">Recovery Plan for the Pacific Bald Eagle</a>	<a href="#">Implementation Progress</a>	Final
Birds	Bald eagle ( <i>Haliaeetus leucocephalus</i> )	lower 48 States	Recovery	Rock Island Ecological Services Field Office	<a href="#">Southeastern States Bald Eagle Recovery Plan</a>	<a href="#">Implementation Progress</a>	Final Revision 1
Birds	Bald eagle ( <i>Haliaeetus leucocephalus</i> )	lower 48 States	Recovery	Rock Island Ecological Services Field Office	<a href="#">Northern States Bald Eagle Recovery Plan</a>	<a href="#">Implementation Progress</a>	Final
Birds	Bald eagle ( <i>Haliaeetus leucocephalus</i> )	lower 48 States	Recovery	Rock Island Ecological Services Field Office	<a href="#">Chesapeake Bay Bald Eagle Recovery Plan</a>	<a href="#">Implementation Progress</a>	Final Revision 1
Clams	Orangenacre mucket ( <i>Lampsilis perovalis</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Southern acornshell ( <i>Epioblasma othcaloogensis</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Upland combshell ( <i>Epioblasma metastriata</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Finelined pocketbook ( <i>Lampsilis altilis</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Ovate clubshell ( <i>Pleurobema perovatum</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Clams	Southern clubshell ( <i>Pleurobema decisum</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Triangular Kidneyshell ( <i>Ptychobranchus greenii</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Alabama moccasinshell ( <i>Medionidus acutissimus</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Coosa moccasinshell ( <i>Medionidus parvulus</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Southern pigtoe ( <i>Pleurobema georgianum</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Fishes	Cahaba shiner ( <i>Notropis cahabae</i> )	Wherever found	Endangered	Mississippi Ecological Services Field Office	<a href="#">Cahaba Shiner</a>	<a href="#">Implementation Progress</a>	Final
Fishes	Goldline darter ( <i>Percina aurolineata</i> )	Wherever found	Threatened	Mississippi Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Flowering Plants	Georgia rockcress ( <i>Arabis georgiana</i> )	Wherever found	Threatened	Georgia Ecological Services Field Office			
Flowering Plants	Mohr's Barbara's buttons ( <i>Marshallia mohrii</i> )	Wherever found	Threatened	Mississippi Ecological Services Field Office	<a href="#">Mohr's Barbara's Button</a>	<a href="#">Implementation Progress</a>	Final
Flowering Plants	Gentian pinkroot ( <i>Spigelia gentianoides</i> )	Wherever found	Endangered	Panama City Ecological Services Field Office	<a href="#">Recovery Plan for Spigelia gentianoides (Gentian pinkroot)</a>	<a href="#">Implementation Progress</a>	Final
Flowering Plants	Tennessee yellow-eyed grass ( <i>Xyris tennesseensis</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Tennessee Yellow-Eyed Grass</a>	<a href="#">Implementation Progress</a>	Final
Mammals	Indiana bat ( <i>Myotis sodalis</i> )	Wherever found	Endangered	Bloomington Ecological Services Field Office	<a href="#">Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision</a>	<a href="#">Implementation Progress</a>	Draft Revision 1

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Mammals	Gray bat ( <i>Myotis grisescens</i> )	Wherever found	Endangered	Columbia Ecological Services Field Office	<a href="#">Gray Bat</a>	<a href="#">Implementation Progress</a>	Final
Snails	Tulotoma snail ( <i>Tulotoma magnifica</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Snails	Rough hornsnail ( <i>Pleurocera foremani</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for Georgia pigtoe mussel (<i>Pleurobema hanleyianum</i>), interrupted rocksнail (<i>Leptoxis foremani</i>) and rough hornsnail (<i>Pleurocera foremani</i>)</a>	Recovery efforts in progress, but no implementation information yet to display.	Final
Snails	Cylindrical lioplax (snail) ( <i>Lioplax cyclostomaformis</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Final Recovery Plan for Six Mobile Basin Aquatic Snails</a>	<a href="#">Implementation Progress</a>	Final
Snails	Flat pebblesnail ( <i>Lepyrium showalteri</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Final Recovery Plan for Six Mobile Basin Aquatic Snails</a>	<a href="#">Implementation Progress</a>	Final
Snails	Painted rocksнail ( <i>Leptoxis taeniata</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Final Recovery Plan for Six Mobile Basin Aquatic Snails</a>	<a href="#">Implementation Progress</a>	Final
Snails	Round rocksнail ( <i>Leptoxis ampla</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Final Recovery Plan for Six Mobile Basin Aquatic Snails</a>	<a href="#">Implementation Progress</a>	Final



[ECOS](#) / [Species Reports](#) / Species By County Report

## Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the [IPaC](#) application.

County: Bibb, Alabama

[CSV](#)

Need to contact a FWS field office about a species? Follow [this link](#) to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Amphibians	Black warrior (=Sipsey Fork) Waterdog ( <i>Necturus alabamensis</i> )	Wherever found	Proposed Endangered	Assistant Regional Director-Ecological Services			
Birds	Red-cockaded woodpecker ( <i>Picoides borealis</i> )	Wherever found	Endangered	Mississippi Ecological Services Field Office	<a href="#">Red-cockaded Woodpecker Recovery Plan, Second Revision</a>	<a href="#">Implementation Progress</a>	Final Revision 2
Birds	Wood stork ( <i>Mycteria americana</i> )	AL, FL, GA, MS, NC, SC	Threatened	North Florida Ecological Services Field Office	<a href="#">Revised Recovery Plan for the U.S. Breeding Population of the Wood Stork</a>	<a href="#">Implementation Progress</a>	Final Revision 1
Clams	Orangenacre mucket ( <i>Lampsilis perovalis</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Southern acornshell ( <i>Epioblasma othcaloogensis</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Upland combshell ( <i>Epioblasma metastriata</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Finelined pocketbook ( <i>Lampsilis altilis</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Ovate clubshell ( <i>Pleurobema perovatum</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Southern clubshell ( <i>Pleurobema decisum</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Clams	Triangular Kidneyshell ( <i>Ptychobranchus greenii</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Clams	Alabama moccasinshell ( <i>Medionidus acutissimus</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Fishes	Alabama sturgeon ( <i>Scaphirhynchus suttkusi</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Recovery Plan for the Alabama Sturgeon (<i>Scaphirhynchus suttkusi</i>)</a>	Recovery efforts in progress, but no implementation information yet to display.	Final
Fishes	Cahaba shiner ( <i>Notropis cahabae</i> )	Wherever found	Endangered	Mississippi Ecological Services Field Office	<a href="#">Cahaba Shiner</a>	<a href="#">Implementation Progress</a>	Final
Fishes	Goldline darter ( <i>Percina aurolineata</i> )	Wherever found	Threatened	Mississippi Ecological Services Field Office	<a href="#">Recovery Plan for the Mobile River Basin (15 species)</a>	<a href="#">Implementation Progress</a>	Final
Flowering Plants	Georgia rockcress ( <i>Arabis georgiana</i> )	Wherever found	Threatened	Georgia Ecological Services Field Office			
Flowering Plants	Mohr's Barbara's buttons ( <i>Marshallia mohrii</i> )	Wherever found	Threatened	Mississippi Ecological Services Field Office	<a href="#">Mohr's Barbara's Button</a>	<a href="#">Implementation Progress</a>	Final
Flowering Plants	Gentian pinkroot ( <i>Spigelia gentianoides</i> )	Wherever found	Endangered	Panama City Ecological Services Field Office	<a href="#">Recovery Plan for Spigelia gentianoides (Gentian pinkroot)</a>	<a href="#">Implementation Progress</a>	Final
Flowering Plants	White fringeless orchid ( <i>Platanthera integrilabia</i> )	Wherever found	Threatened	Assistant Regional Director-Ecological Services			
Flowering Plants	Alabama canebrake pitcher-plant ( <i>Sarracenia rubra ssp. alabamensis</i> )	Wherever found	Endangered	Mississippi Ecological Services Field Office	<a href="#">Alabama Canebreak Pitcher-Plant</a>	<a href="#">Implementation Progress</a>	Final
Flowering Plants	Tennessee yellow-eyed grass ( <i>Xyris tennesseensis</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<a href="#">Tennessee Yellow-Eyed Grass</a>	<a href="#">Implementation Progress</a>	Final
Insects	Mitchell's satyr Butterfly ( <i>Neonympha mitchellii mitchellii</i> )	Wherever found	Endangered	East Lansing Ecological Services Field Office	<a href="#">Mitchell's Satyr Butterfly</a>	<a href="#">Implementation Progress</a>	Final
Mammals	Indiana bat ( <i>Myotis sodalis</i> )	Wherever found	Endangered	Bloomington Ecological Services Field Office	<a href="#">Indiana Bat (<i>Myotis sodalis</i>) Draft Recovery Plan: First Revision</a>	<a href="#">Implementation Progress</a>	Draft Revision 1

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Mammals	Gray bat ( <i>Myotis grisescens</i> )	Wherever found	Endangered	Columbia Ecological Services Field Office	Gray Bat	<u>Implementation Progress</u>	Final
Reptiles	Flattened musk turtle ( <i>Sternotherus depressus</i> )	Black Warrior R. system upstream from Bankhead Dam	Threatened	Mississippi Ecological Services Field Office	Flattened Musk Turtle	<u>Implementation Progress</u>	Final
Snails	Cylindrical lioplax (snail) ( <i>Lioplax cyclostomaformis</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<u>Final Recovery Plan for Six Mobile Basin Aquatic Snails</u>	<u>Implementation Progress</u>	Final
Snails	Flat pebblesnail ( <i>Lepyrium showalteri</i> )	Wherever found	Endangered	Alabama Ecological Services Field Office	<u>Final Recovery Plan for Six Mobile Basin Aquatic Snails</u>	<u>Implementation Progress</u>	Final
Snails	Round rocksnail ( <i>Leptoxis ampla</i> )	Wherever found	Threatened	Alabama Ecological Services Field Office	<u>Final Recovery Plan for Six Mobile Basin Aquatic Snails</u>	<u>Implementation Progress</u>	Final

**ATTACHMENT V**

**A preliminary list of data sources addressing the Cahaba  
River System**

## **PRELIMINARY LIST OF DATA SOURCES ADDRESSING THE CAHABA RIVER SYSTEM (Jeff Powell, USFWS)**

### **Agency Continuous Monitoring Data**

Alabama Department of Environmental Management (ADEM). Water chemistry and biological samples.

Jefferson County Environmental Services, Barton Lab. Water chemistry and biological samples.

Storm Water Management Authority, Inc. (SWMA). Water chemistry and biological samples.

United States Geological Survey (USGS). Flow gage, water chemistry and biological samples.

### **Journal Articles**

El-Kaddah, D. N. and Carey, A. E. 2000. *Water quality modeling of the Cahaba River, Alabama*. Environmental Geology 45(3): 323-338.

Lein, G. M. and DeVries, D. R. 1998. *Paddlefish in the Alabama River drainage: Population characteristics and the adult spawning migration*. Transactions of the American Fisheries Society 127(3): 441-454.

Onorato, D., Marion, K. R. and Angus, R. A. 1998. *Longitudinal variations in the ichthyofaunal assemblages of the upper Cahaba River: Possible effects of urbanization in a watershed*. J. of Freshwater Ecology 13(2): 139-153.

Onorato, D., Marion, K. R. and Angus, R. A. 1998. *Comparison of a small-mesh seine and a backpack electrofisher to evaluate fish populations in a north-central Alabama stream*. North American Journal of Fisheries of Management 18: 361-373.

Onorato, D., Angus, R. A. and Marion, K. R. 2000. *Historical changes in the ichthyofaunal assemblages of the upper Cahaba River in Alabama associated with extensive urban development in the watershed*. J. of Freshwater Ecology 15(1): 47-63.

### **Agency Reports/Publications**

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Federal Register. **Vol. 55, No. 53.** 1990. Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17. *Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Cahaba Shiner (Notropis cahabae)*. pp 10083-10087.

Federal Register. **Vol. 57, No. 78.** 1992. Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17. *Endangered and Threatened Wildlife and Plants; Threatened Status for Two Fish, the Goldline Darter (Percina Aurolineata) and Blue Shiner (Cyprinella Caerulea).* pp. 14786-14790.

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Federal Register. **Vol. 63, No. 208.** 1998. Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17. *Endangered and Threatened Wildlife and Plants; Endangered Status for Three Aquatic Snails, and Threatened Status for Three Aquatic Snails in the Mobile River Basin of Alabama.* pp. 57610-57620.

<http://endangered.fws.gov/r/fr98651.html>

Federal Register. **Vol. 65, No. 88.** 2000. Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17. *Endangered and Threatened Wildlife and Plants; Final Rule to List the Alabama Sturgeon as Endangered; Final Rule.* pp. 26-438-26-461.

Howard, Hoke S., Quinn, B., Flexner, M.C., and Raschke, R. L. 2002. *Cahaba River: Biological and water quality studies, Birmingham, Alabama. March/April, September and July, 2002.* U.S. Environmental Protection Agency, Region 4, Science and Ecosystem Support Division, Ecological Support Branch.

Howell, W. M. and Davenport, L. J. 2001. *Report on fishes and macroinvertebrates of the upper Cahaba River and three additional sites.* Submitted to Jefferson County Environmental Services, Barton Laboratory.

Howell, W. M. and Davenport, L. J. 2002. *Report on fishes and macroinvertebrates of the upper Cahaba River and four additional sites.* Submitted to Jefferson County Environmental Services, Barton Laboratory.

Howell, W. M. and Davenport, L. J. 2003. *Report on fishes and macroinvertebrates found at eleven sites on the upper Cahaba River during fall 2002.* Submitted to Jefferson County Environmental Services, Barton Laboratory.

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O'Neil, Patrick E. 2002. *A biological assessment of selected sites in the Cahaba River System, Alabama. Project Report*. Geological Survey of Alabama.

Pierson, J. M., Howell, M. H., Stiles, R. A., Mettee, M. F., O'Neil, P. E., Sutkus, R. D. and Ramsey, J. S. 1989. *Fishes of the Cahaba River System in Alabama*. **Bulletin 134**. Geological Survey of Alabama. 183 pp.

Shepard, T.E., O'Neil, P.E., McGregor, S.W., and Harris, S.C. 1994. *Water-quality and biomonitoring studies in the upper Cahaba River drainage of Alabama*. **Bulletin 160**. Geological Survey of Alabama. 118 pp.

Shepard, T.E., O'Neil, P.E., McGregor, S.W., Mettee, M.F., and Harris, S.C. 1997. *Biomonitoring and water-quality studies in the upper Cahaba River drainage of Alabama, 1989-94*. **Bulletin 165**. Geological Survey of Alabama. 255 pp.

### **Dissertation/Thesis Research**

Buchanan, J. V. 1992. *The burrowing crayfishes (Decapoda: Cambaridae) of the Cahaba River System (Alabama)*. Master's Thesis, Department of Biology, University of South Alabama.

Corn, Frances Elizabeth. 2000. *A bioassessment of seven tributaries of the Upper Cahaba River using benthic macroinvertebrate populations*. Master's Thesis, Department of Biology, University of Alabama at Birmingham.

El-Kaddah, Dahlia N. 2000. *Water quality modeling of the Cahaba River, Alabama*. Master's Thesis, Department of Civil and Environmental Engineering, University of Alabama.

Honavar, Jaideep V. 2003. *Assessment of ichthyofaunal assemblages as indicators of sedimentation in the upper Cahaba River and its Tributaries*. Master's Thesis, Department of Biology, University of Alabama at Birmingham.

Lindsey, Kristen L. 1998. *A bioassessment of the Upper Cahaba River using benthic macroinvertebrate populations*. Master's Thesis, Department of Biology, University of Alabama at Birmingham.

May, M. M. 1963. *A study of the fishes of the Cahaba River drainage system of Alabama*. Master's Thesis. University of Alabama.

Onorato, David P. 1997. *Icthyological bioassessment of the Upper Cahaba River of Alabama: An analysis of the selection of sampling gears, current trends in fish assemblages, and historical changes within the ichthyofaunal communities*. Master's Thesis, Department of Biology, University of Alabama at Birmingham.

Owens, Janna Y. 2004 (pending). *Evaluation of sedimentation indicators utilizing macroinvertebrates in the Upper Cahaba River and its Tributaries*. Doctoral Dissertation, Department of Biology, University of Alabama at Birmingham.

Tant, Cynthis J. 2000. *Evaluation of selected biomonitoring metrics on benthic macroinvertebrate communities in Little Cahaba Creek, Cahaba River, Alabama*. Master's Thesis, Department of Biology, University of Alabama.

### **Academic Project Reports**

Lalor, M.M., Griffin, D.H., Clark, S., Crawford, S. and Beckom, N. 1998. *Stormwater nutrient contributions in urbanizing watersheds. Final Project Report*. Department of Civil and Environmental Engineering, University of Alabama at Birmingham. 92 pp.

Lalor, M.M., Angus, R.A., Marion, K. R., Lindsey, K.L., and Onorato, D.P. 1998. *Icthyological bioassessment of the upper Cahaba River of Alabama: An analysis of the selection of sampling gears, current trends in fish assemblages, and historical changes within the ichthyofaunal communities. Final Project Report: Section I for Modeling biological communities in the Cahaba River utilizing a geographical information system*. Department of Civil and Environmental Engineering, University of Alabama at Birmingham.

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**ATTACHMENT VI**

**USFWS Provided Data File - Shades\_Cahaba\_IBI.xlsx**

		1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	
Stream name		Shades Creek	Cahaba River	downstream of													
Longitude		87.02999	87.03312	87.03312	86.8781	87.03312	87.02999	87.03542	87.02999	87.03312	87.0296	87.028	87.0283	87.0296	87.0296		
Latitude		33.18618	33.21991	33.21991	33.3567	33.21991	33.18618	33.22749	33.18618	33.21991	33.1653	33.175	33.1743	33.1653	33.1653		
County		Bibb	Bibb	Bibb	Jefferson	Bibb											
Level IV ecoregion		67h	67h	67h	67g	67h											
GSA No.		2212	2213	4748	2743	1119	1120	1052	1053	1058	2830	2831	2829	2828	916		
Sample date		7/1/2008	7/1/2008	5/23/1994	10/8/2004	10/24/2012	10/24/2012	6/25/2014	6/25/2014	8/4/2014	5/26/2004	5/26/2004	5/26/2004	5/26/2004	5/26/2004	5/16/2016	
Ichthyoregion		RVP															
Watershed area sq miles		138	132	132	41.4	132	138	128	138	132	556	555	555	556	556	556	
Ichthyomyzon bdellium	Ohio lamprey																
Ichthyomyzon castaneus	chestnut lamprey																
Ichthyomyzon gagei	southern brook lamprey																
Ichthyomyzon greeleyi	mountain brook lamprey																
Lampetra aepyptera	least brook lamprey																
Lampetra appendix	American brook lamprey																
Carcharhinus leucas	bull shark																
Acipenser fulvescens	lake sturgeon																
Acipenser oxyrinchus desotoi	Atlantic sturgeon																
Scaphirhynchus platirhynchus	shovelnose sturgeon																
Scaphirhynchus suttkusi	Alabama sturgeon																
Polyodon spathula	paddlefish																
Atractosteus spatula	alligator gar																
Lepisosteus oculatus	spotted gar																
Lepisosteus osseus	longnose gar										1				2	30	6
Lepisosteus platostomus	shortnose gar																
Amia calva	bowfin															2	
Hiodon alosoides	goldeye																
Hiodon tergisus	mooneye																
Anguilla rostrata	American eel																
Alosa alabamae	Alabama shad																
Alosa chrysocloris	skipjack herring																
Dorosoma cepedianum	gizzard shad																5
Dorosoma petenense	threadfin shad																
Anchoa mitchilli	bay anchovy																
Campostoma oligolepis	largescale stoneroller	53	64	9	862	5	49	21	65	16	15	17					
C. pauciradii	bluefin stoneroller																
Carassius auratus	goldfish																
Clinostomus funduloides	rosyside dace																
Ctenopharyngodon idella	grass carp																1
Cyprinella caerulea	blue shiner																
Cyprinella callistia	Alabama shiner	95	55	40	20	29	74	59	77	42	34	74				7	
Cyprinella callitaenia	bluestripe shiner																
Cyprinella galactura	whitetail shiner																
Cyprinella gibssi	Tallapoosa shiner																
Cyprinella lutrensis	red shiner																
Cyprinella spiloptera	spotfin shiner																
Cyprinella trichroistia	tricolor shiner			3			5	8	33		10	2					
Cyprinella venusta	blacktail shiner	12	2	1	63		12	1	14	1	71	55	2	7	1		
Cyprinella whipplei	steelcolor shiner																
Cyprinus carpio	carp															4	
Erimonax monachus	spotfin chub																
Erimystax dissimilis	streamline chub																
Erimystax insignis	blotched chub																
Hemitremia flammea	flame chub																
Hybognathus hayi	cypress minnow																
Hybognathus nuchalis	Mississippi silvery minnow																
Hybopsis amblops	bigeye chub																
Hybopsis lineapunctata	lined chub																
Hybopsis winchelli	clear chub					8			4	2	4	37	1				13









Percina smithvanizi	muscadine darter														
Percina sipsi	Bankhead darter														
Percina species	halloween darter														
Sander canadense	sauger														
Sander vitreus	walleye														
Aplodinotus grunniens	freshwater drum												8	3	
Elassoma alabamae	spring pygmy sunfish														
Elassoma evergladei	Everglades pygmy sunfish														
Elassoma zonatum	banded pygmy sunfish														
Paralichthys lethostigma	southern flounder														
Trinectes maculatus	hogchoker														
	hybrid cyprinid														
	hybrid percid														
	hybrid centrarchid					2									
	hybrids other														
	Total efforts	34	32	32	46	32	32	32	32	34	38	6	6	12	
	Total specimens	454	371	124	1267	134	367	349	683	369	1183	542	35	116	244
	Total anomalies	10	3	0	2	0	2	0	0	1	0	0	0	0	0
<b>SPECIES RICHNESS-DIVERSITY</b>															
	Total species	27	21	18	20	17	20	26	28	24	25	20	11	20	25
	Total native species	27	21	18	20	17	20	26	28	24	25	20	11	19	25
	Num cyprinid species	7	5	6	8	5	8	8	10	7	9	7	1	2	7
	Num shiner species	5	4	4	4	4	5	5	6	4	6	4	1	2	5
	Num sucker species	3	1	2	3	1	2	3	2	2	0	1	3	4	4
	Num <i>Lepomis</i> species	4	4	2	4	3	2	4	3	4	3	2	3	2	5
	Num Centrarchidae species	7	7	3	5	3	3	6	5	6	4	4	4	6	7
	Num darter species	7	5	5	2	6	6	7	8	6	8	6	0	2	1
	Num darter+madtom sp	7	5	5	2	6	6	7	8	6	8	6	0	2	1
	Num dart+madtom+sculpin sp	7	5	5	2	6	6	7	8	7	8	6	0	2	1
	Num terete minnow sp	2	1	2	3	1	3	2	3	2	2	2	0	0	1
<b>TOLERANCE-INTOLERANCE</b>															
	% dominant sp	20.93	17.25	32.26	68.03	27.61	22.62	30.95	27.96	52.85	24.26	25.28	22.86	25.86	17.21
	Num intolerant sp (1)	0	0	0	0	0	0	0	1	0	1	0	1	1	2
	Num intolerant sp (2)	4	2	1	0	2	2	2	3	2	3	2	0	1	0
	Num intolerant sp (total)	4	2	1	0	2	2	2	4	2	4	2	1	2	2
	% tolerant	5.07	7.28	9.68	4.03	3.73	0.54	8.31	2.64	4.88	6.17	4.98	17.14	37.07	26.23
	% green sunfish	0.66	1.89	0	2.05	0.75	0	2.01	0.29	0.81	0.76	1.48	2.86	0	0.41
	% stonerollers	11.67	17.25	7.26	68.03	3.73	13.35	6.02	9.52	4.34	1.27	3.14	0	0	0
	% green sunfish + yellow bullhead	0.66	1.89	0	2.21	0.75	0	2.29	0.29	0.81	0.76	1.48	2.86	0	0.41
	% GSF+BG+YB+CC	4.63	8.09	3.23	2.92	4.48	0.27	8.31	2.2	4.88	1.01	2.58	22.86	8.62	18.85
	% <i>Lepomis</i>	22.69	17.25	12.1	5.52	7.46	1.63	10.6	2.34	5.42	4.99	2.77	17.14	12.93	29.51
	% as sunfish	22.91	17.52	12.1	5.52	7.46	1.63	10.6	2.34	5.42	4.99	2.77	17.14	13.79	29.51
<b>TROPHIC</b>															
	% omnivores	11.67	17.25	7.26	68.67	3.73	13.62	6.02	9.96	4.34	6.51	6.64	0	7.76	4.51
	% insectivorous cyprinids	29.74	25.88	51.61	15.15	54.48	49.86	62.18	64.42	68.83	60.02	56.46	5.71	6.9	36.07
	% invertivores	47.36	32.35	47.58	10.18	33.58	26.16	26.65	16.11	17.07	13.44	26.38	65.71	42.24	45.08
	% top carnivores (piscivores)	3.74	5.39	1.61	0.79	0	0.54	0.57	2.64	2.17	0.42	0.74	31.43	43.97	13.93
<b>ABUNDANCE-CONDITION-REPRO</b>															
	Total catch	454	371	124	1267	134	367	349	683	369	1183	542	35	116	244
	Catch per effort	13.35	11.59	3.88	27.54	4.19	11.47	10.91	21.34	11.53	34.79	14.26	5.83	19.33	20.33
	% anomalies (DELT)	2.2	0.81	0	0.16	0	0.54	0	0	0.27	0	0	0	0	0
	% hybrids	0	0	0	0.16	0	0	0	0	0	0	0	0	0	0
	% anomalies + hybrids	2.2	0.81	0	0.32	0	0.54	0	0	0.27	0	0	0	0	0
	% simple lithophils	36.12	41.51	37.1	17.68	57.46	56.68	53.87	54.9	72.63	54.02	57.56	31.43	7.76	18.44
	% manipulative lithophils	34.58	35.04	26.61	73.64	11.19	14.99	16.62	12.01	10.03	6.26	5.9	17.14	13.79	29.1
	% lithophilic spawners	70.7	76.55	63.71	91.32	68.65	71.67	70.49	66.91	82.66	60.28	63.46	48.57	21.55	47.54
	Num lithophilic spawners	19	13	12	13	12	13	17	18	16	14	12	5	7	10
	% simple miscellaneous	25.33	17.79	33.87	6.63	30.6	27.52	28.65	29.87	15.18	33.81	31.18	14.29	51.72	34.02
	% manipulative miscellaneous	3.96	5.66	2.42	1.89	0.75	0.82	0.86	3.22	2.17	5.92	5.35	37.14	19.83	17.21
	% manipulative spawners	38.54	40.7	29.03	75.53	11.94	15.81	17.48	15.23	12.2	12.18	11.25	54.28	33.62	46.31
	% misc spawners	29.29	23.45	36.29	8.52	31.35	28.34	29.51	33.09	17.35	39.73	36.53	51.43	71.55	51.23

	% simple lithophils + tolerants	41.19	48.79	46.78	21.71	61.19	57.22	62.18	57.54	77.51	60.19	62.54	48.57	44.83	44.67	
	Ridge and Valley IBI															
	1. Total native species	3	3	3	3	1	3	3	3	3	3	1	1	1	3	
	2. Number shiner species	3	3	3	3	3	3	3	3	3	3	3	1	1	3	
Very Poor - <=26	3. Number Lepomis species	3	3	1	3	1	1	3	1	3	1	1	1	1	3	
Poor - 27-34	4. Number of darter+madtom	5	3	3	1	3	3	5	5	3	5	3	1	1	1	
Fair - 35-42	5. Number of intolerant speci	5	3	3	1	3	3	3	5	3	5	3	3	3	3	
Good - 43-50	6. Percent of tolerant species	5	5	5	5	5	5	5	5	5	5	5	3	1	3	
Excellent - >50	7. Percent Lepomis	3	3	3	5	5	5	3	5	5	5	5	3	3	3	
	8. Percent omnivores	5	3	5	1	5	5	5	5	5	5	5	5	5	5	
	9. Percent insectivorous crpri	1	1	3	1	3	3	5	5	5	5	3	1	1	3	
	10. Percent top carnivores	5	5	3	3	1	1	1	5	5	1	1	5	5	5	
	11. Percent DELT+hybrids	1	1	5	3	5	1	5	5	3	5	5	5	5	5	
	12. Percent simple miscellan	3	3	3	1	3	3	3	3	3	3	3	1	5	3	
	Total IBI score	42	36	40	30	38	36	44	50	46	46	38	30	32	40	
		Fair	Fair	Fair	Poor	Fair	Fair	Good	Good	Good	Good	Fair	Poor	Poor	Fair	

**ATTACHMENT VII**

**Historical Mussel and Gastropod surveys in the**

**Cahaba River Basin**

**(provided by the USFWS)**

Appendix ?. Database of historical freshwater mussel collections taken from the Cahaba River Basin. Historical distribution records have been assembled from the American Museum of Natural History (AMNH), in New York, NY; National Academy of Sciences (ANSP) in Philadelphia, PA; Florida State Museum of Natural History (FLMNH) in Gainesville, FL; Museum of Fluvial Mollusks (MFM) in Cleveland, TN; North Carolina Museum of Natural History (NCMNH), Raleigh, NC; The Ohio State University Museum (OSUM) in Columbus, OH; the University of Michigan Natural History Museum (UMMZ) in Ann Arbor, MI; and the Smithsonian Institution (USNM) in Washington, D.C..

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Amblema elliotti</i>	AMNH 127910	Cahaba River, 3 miles N-NW of Falliston, Nunnally Ford, Shelby Co., AL	H.D. Athearn	October 11, 1951
	ANSP 41594	Cahaba River, Big Prairie Creek, AL	E.R. Showalter	
	ANSP 48235	Cahaba River, Valley Creek, Jefferson Co., AL	B. Walker	1914
	ANSP 127434	Cahaba River, Big Prairie Creek, AL		
	ANSP 89077	Cahaba River, Helena, AL	H.H. Smith	
	MFM 127910	Cahaba River, 3 miles N - NW of Fallisean (Nunnally Ford), Shelby Co., AL	H.D. Athearn	Oct. 11, 1951
	MFM 20548	Little Cahaba River, Bulldog Bend, 3.6 km SE of Piper, Bibb Co., AL	H.D. Athearn	August 31, 1969
	MFM 2297	Cahaba River, 3 miles NNW of Fallistown, Shelby Co., AL	H.D. Athearn	October 11, 1951
	MFM 2320	Cahaba River, 1½ miles NNW of Piper, Bibb Co., AL	H.D. Athearn	October 11, 1951
	MFM 13144	Cahaba River, Caldwell Ford, 3.2 miles S of Cahaba Heights, Shelby Co., AL		January 1, 1966
OSUM 279				
		Little Cahaba River, Co. Rt. 65, Bulldog Bend, Bibb Co., AL	W.N. Kasson, G. T. Watters	July 29, 1986
	OSUM 27491	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 31923	Cahaba River, at island 300 yds above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V.Pearson, J.C. Hall	September 16, 1968
OSUM 31998				
		Cahaba River, at Pratts Ferry, Co. Rt. 27, Bibb Co., AL	J.D. Williams, C.S. Baldwin, V.Pearson, J.C. Hall	September 16, 1972
	OSUM 32014	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	C.S. Baldwin	November 5, 1972
OSUM 32042				
		Cahaba River, below US Rt. 280, Jefferson Co., AL	J.D. Williams	October 14, 1972

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Amblema ellotti</i>	OSUM 32084	Cahaba River, below US Rt. 78, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32092	Cahaba River, below Lovick, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32322	Cahaba River, at Co. Rt. 251, Booth Ford, Shelby Co., AL	W. Wieland, R.K. Wallase	July 7, 1978
	OSUM 32449	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	K.S. Cummings, C.A. Mayer, S.T. Sobaski	May 18, 1988
	OSUM 41369	Cahaba River, at Co. Rt. 29, Caldwell Ford, Shelby Co., AL	H.D. Athearn	January 1, 1966
<i>Amblema plicata</i>	ANSP 100713	Cahaba River, Gurnee, AL	H.H. Smith and B. Walker	1919
	FLMNH 66280	Little Cahaba Creek, Bibb Co., AL	H.H. Smith	June 1, 1916
	FLMNH 25667	Little Cahaba River, Hwy 5 Bridge, Bibb Co., AL	Gilbert	April 14, 1978
	FLMNH 180559	Cahaba River, Lily Shoals, Bibb Co., AL	J.H. Bey	
	FLMNH 63879	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1913
	FLMNH 63833	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 9, 1912
	FLMNH 46973	Cahaba River, Lily Shoals, 2 mi N of CR 24, AL	H. Lee	October 11, 1981
	FLMNH 63873	Cahaba River, Jefferson Co., AL	H.H. Smith	August 1912
	FLMNH 63865	Cahaba River, Tuscaloosa Pike Crossing, AL	H.H. Smith	September 7, 1935
	FLMNH 63864	Buck Creek, Shelby Co., AL	T.H. Aldrich	
	OSUM 27537	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 27590	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 32006	Cahaba River, Shelby Co./Jefferson Co., AL	J.D. Williams	October 13-14, 1972
	OSUM 32024	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32057	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32112	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32141	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	UMMZ 100055	Buck Creek, AL		
	UMMZ 100058	Cahaba River, Helena, Shelby Co., AL		
	UMMZ 100063	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 100060	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Amblema plicata</i>	UMMZ 100059	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 100061	Cahaba River, Lily Shoal, Bibb Co., AL	H.E. Wheeler	
<i>Anodonta sp.</i>	OSUM 68301	Shades Creek, Jefferson Co., AL	H.E. Wheeler	prior to 1958
<i>Anodontoides radiatus</i>	FLMNH 64081	Dallas Co., AL	R. Howard	August 1915
	OSUM 56994	Rice Creek, Perry Co., AL	J.C. Hall	July 10, 1993
	OSUM 57656	Oakmulgee Creek, at AL Rt. 14, Dallas Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	OSUM 57979	Oakmulgee Creek, at dirt section of Co. Rt. 30, Perry Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	UMMZ 55016	Bear Creek, 3 mi S of Orrville, Dallas Co., AL	W.F. Webb	
<i>Arcidens confragosus</i>	FLMNH 244017	Alabama River, below Rt 28 Bridge, Millers Ferry Reservoir, 12 mi NW of Camden, Wilcox Co., AL	W.H. McCullagh	June 17, 1995
<i>Ellipsaria lineolata</i>	FLMNH 197854	Cahaba River, below Harrisburg, 7.5 mi SW Centreville, Bibb Co., AL	M. Pierson, S. Puleo	July 28, 1990
	OSUM 27496	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 31971	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32437	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 56718	Cahaba River, Centreville, Bibb Co., AL	S.W. McGregor, P.E. O'Neil	September 14, 1994
	OSUM 74677	Cahaba River, SR 14, Perry Co., AL	H. McCullagh	May 6, 1996
	UMMZ 58396	Cahaba River, 5 mi S of Marion, Perry Co., AL		
	UMMZ 58415	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 65796	Cahaba River, US 80 Bridge, W of Selma, Dallas Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
	UMMZ 65755	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 65767	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
<i>Elliptio arca</i>	FLMNH 64708	Cahaba River, Bibb Co., AL	E.R. Showalter	
	FLMNH 67009	Buck Creek, Helena, Shelby Co., AL	H.H. Smith	July 2, 1913
	MFM 22803	Cahaba River, just above the confluence of Patton Creek, 7.5 km NNE of Helena, Shelby Co., AL	H.D. Athearn	August 24, 1971
	OSUM 31927	Cahaba River, at island 300 yds above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V.Pearson, J.C. Hall	September 16, 1972
	OSUM 31983	Cahaba River, below US Rt. 82, Centreville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32017	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32146	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32341	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	UMMZ 163901	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 65703	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
<i>Elliptio arctata</i>	UMMZ 96492	Cahaba River, Gurnee, Shelby Co., AL		
	UMMZ 96494	Cahaba River, Pine Island, Bibb Co., AL		
	AMNH 180070	Cahaba River, AL		
	ANSP 100608	Cahaba River, Gurnee, AL	H.H. Smith	
	ANSP 47721	Cahaba River, Valley Creek, Jefferson Co., AL	B. Walker	1919
	ANSP 100618	Cahaba River, Gurnee, AL	H.H. Smith	
	ANSP 89027	Cahaba River, Helena, AL	H.H. Smith	
	ANSP 339022	Cahaba River, AL		
	ANSP 328033	Cahaba River, off C.R. 10, old slab crossing beyond Pea Ridge, 12 mile from Montevallo, Shelby Co., AL	Davis	July 5, 1972
	FLMNH 269258	Shoal Creek, Montevallo, Shelby Co., AL	H.H. Smith	
	FLMNH 64434	Little Cahaba Creek, Bibb Co., AL	H.H. Smith	June 1916

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elliptio arctata</i>	FLMNH 64384	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 9, 1912
	FLMNH 64390	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 244554	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 64421	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	August 1912
	FLMNH 64420	Cahaba River, near Henry Ellen, Jefferson Co., AL		September 15, 1935
	FLMNH 197835	Cahaba River, 3.2 mi SE of Irondale, CR 143, AL	M. Pierson	July 27, 1990
	MFM 180070	Cahaba River, AL		
	MFM 2325	Cahaba River, 1.5 miles NNW of Piper, Bibb Co., AL	H.D. Athearn and D.H. Stansberry	October 11, 1951
	MFM 13146	Cahaba River, Caldwell Ford site, 3.2 miles S of Cahaba Heights, Shelby Co., AL	H.D. Athearn	November 1, 1966
	OSUM 25812	Cahaba River, AL	Henry Moores Collection	18--
	OSUM 27540	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 27591	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 32030	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32058	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32085	Cahaba River, below US Rt. 78, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32093	Cahaba River, below Lovick, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32116	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32145	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32291	Six Mile Creek, at AL Rt. 25, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 35475	Cahaba River, AL	collector unknown	18--
	OSUM 38032	Cahaba River, Shelby Co., AL	T.H. Aldrich	18--
	OSUM 38033	Cahaba River, Shelby Co., AL	T.H. Aldrich	18--
	OSUM 68345	Cahaba River, AL	R.E. Call	18--
UMMZ 163886	Little Cahaba Creek, Bibb Co., AL	H.H. Smith	June 1916	
	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	1918	
	Cahaba River, AL			

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elliptio arctata</i>	UMMZ 65783	Cahaba River, near Beloit, Dallas Co., AL		
	UMMZ 65745	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 65724	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65712	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL		September 7, 1935
	UMMZ 65686	Buck Creek, at Helena, Shelby Co., AL		September 7, 1936
	UMMZ 65664	Cahaba River, Grant's Mill, Jefferson Co., AL		September 5, 1937
	UMMZ 94037	Cahaba River, AL		
	UMMZ 94038	Buck Creek, Shelby Co., AL		
	UMMZ 94052	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 94054	Cahaba River, Pine Island, Bibb Co., AL		
	UMMZ 94063	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 94058	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 94057	Cahaba River, Wild Cat Island		
	UMMZ 58443	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 55393	Cahaba River, E of Marion Jct, Dallas Co., AL		June 29, 1932
	UMMZ 23251	Cahaba River, AL		
	UMMZ 65692	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
<i>Elliptio crassidens</i>	UMMZ 65654	Cahaba River, Central RR of GA crossing, near Henry Ellen, Jefferson Co., AL		September 5, 1935
	UMMZ 65647	Cahaba River, at Lovick, Jefferson Co., AL		
	AMNH 160844	Cahaba River, 3 miles N-NW of Falliston, Nunnally Ford, Shelby Co., AL	H.D. Athern	October 11, 1951
	ANSP 100581	Cahaba River, Gurnee, AL	H.H. Smith	
	ANSP 176780	Cahaba River, 1 mile N of Acton, AL	W.J. Clench and Okkelberg	
	ANSP 42481	Cahaba River, Helena, AL	H.H. Smith	
	FLMNH 22865	Cahaba River, CR 27, 7-8 mi NE of Carterville, AL	G.H. Burgess	September 6, 1978
	FLMNH 64626	Cahaba River, Piper, Bibb Co., AL	H.H. Smith	1918

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elliptio crassidens</i>	FLMNH 46972	Cahaba River, Lily Shoals, 2 mi N of Rt 24, AL	H. Lee	October 11, 1981
	FLMNH 64619	Cahaba River, 1 mi N of Acton, Bibb Co., AL	W. J. Clench	
	FLMNH 208952	Cahaba River, 6.2 mi NE of Centreville, Hwy 26, AL	M. Pierson	May 8, 1993
	FLMNH 64629	Cahaba River, Pratts Ferry, Bibb Co., AL	H. H. Smith	June 1912
	FLMNH 243969	Cahaba River, 500 mi upstream of Rt 24 bridge, Lily Shoals, above Centreville, Bibb Co., AL	W.H. McCullagh	October 11, 1981
	FLMNH 47270	Cahaba River, Suttle, Perry Co., AL	H. Lee	November 25, 1967
	FLMNH 213744	Cahaba River, Perry Co., AL		June 30, 1977
	MFM 160844	Cahaba River, Nunnally Ford, 3 miles N - NW of Falliston, Shelby Co., AL	H.D. Athearn	Oct. 11, 1951
	OSUM 280	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	W.N. Kasson, G.T. Watters	July 29, 1986
	OSUM 26117	Cahaba River, at AL Rt. 31, Jefferson Co., AL	W.J. Clench, P.O. Okkelberg	1929
	OSUM 27494	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27539	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 31926	Cahaba River, at island 300 yds above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31947	Cahaba River, at island 300 yds above US Rt. 80, Dallas Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31953	Cahaba River, 150 yds below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31969	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31982	Cahaba River, below US Rt. 82, Centreville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32000	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	16 Sept 1972
	OSUM 32008	Cahaba River, Shelby Co./Jefferson Co., AL	J.D. Williams	October 13-14, 1972
	OSUM 32016	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	C.S. Baldwin	November 5, 1972

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elliptio crassidens</i>	OSUM 32029	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32115	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32144	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32328	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32340	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32435	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 56717	Cahaba River, Centreville, Bibb Co., AL	S. W. McGregor, P.E. O'Neil	September 14, 1994
	OSUM 56967	Cahaba River, ca. 1 mi. N of US Rt. 80, Dallas Co., AL	J.C. Hall	July 10, 1993
	OSUM 67773	Cahaba River, Sprott boat ramp, Perry Co., AL	Alabama Dept. Conservation	August 21-22, 1991
	UMMZ 186348	Cahaba River, 3 mi NNW of Falliston, Shelby Co., AL	H.D. Athearn	
	UMMZ 163906	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 65789	Cahaba River, on Rd # 80, W of Selma, Dallas Co., AL		
	UMMZ 65781	Cahaba River, near Beloit, Dallas Co., AL		
	UMMZ 65778	Cahaba River, Cahaba River, W of Sprott, Perry Co., AL		
	UMMZ 65760	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 96509	Cahaba River, AL		
	UMMZ 96535	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
	UMMZ 96531	Cahaba River, Helena, Shelby Co., AL	H.H. Smith	
	UMMZ 96534	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 96538	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 58402	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58386	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 58373	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 58354	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 58420	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 58435	Cahaba River, at Centerville, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elliptio crassidens</i>	UMMZ 58444	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65675	Cahaba River, at Acton, Jefferson Co., AL		September 5, 1935
	UMMZ 65676	Six Mile Creek, at Sixmile, Bibb Co., AL		
	UMMZ 656711	Cahaba River, old Tuscaloosa Pike crossing, Shelby Co., AL		September 7, 1935
	UMMZ 65691	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		September 7, 1935
	UMMZ 65678	Cahaba River, 1 mi above Centerville, Bibb Co., AL		September 6, 1935
	UMMZ 65728	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65737	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 65748	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 48658	Cahaba River, 1 mi N of Acton, Jefferson Co., AL		
	UMMZ 56667	Cahaba River, 1 mi N of Acton, Jefferson Co., AL		
	UMMZ 53392	Cahaba River, E of Marion Jct, Dallas Co., AL		
	UMMZ 55477	Cahaba River, Pratt's Ferry, Bibb Co., AL		
<i>Elliptio icterina</i>	OSUM 38079	Shoal Creek, Montevallo, Shelby Co., AL	T.H. Aldrich	18--
<i>Epioblasma metastriata</i>	ANSP 59853	Cahaba River, AL	E.R. Showalter	
	ANSP 100566	Cahaba River, Gurnee, AL	H.H. Smith	
	FLMNH 64281	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 9, 1912
	FLMNH 64276	Little Cahaba River, Bibb Co., AL	H.H. Smith	January 1916
	FLMNH 64280	Cahaba River, Bibb Co., AL	H.H. Smith	
	FLMNH 226004	Cahaba River/Alabama River, Orrville, Dallas Co., AL		
	FLMNH 64282	Cahaba River, near Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	FLMNH 64290	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	MFM 13137	Cahaba River, at Caldwell Ford site, 3.2 miles S of Cahaba Heights, Shelby Co., AL	H.D. Athearn	January 1, 1966
	MFM 2303	Cahaba River, 3 miles NNW of Fulliston, Shelby Co., AL	H.D. Athearn	October 1, 1951

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Epioblasma metastriata</i>	OSUM 10368	Cahaba River, AL	old Ohio State Museum Collection	18--
	OSUM 27506	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co. AL	J.J. Jenkinson	September 29, 1968
	OSUM 27549	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 27601	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 31990	Cahaba River, below US Rt. 82, Centreville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32004	Cahaba River, at Pratts Ferry, Co. Rt. 27, Bibb Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32040	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32065	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32088	Cahaba River, below US Rt. 78, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32096	Cahaba River, below Lovick, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32126	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32159	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32335	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 38038	Cahaba River, AL	T.H. Aldrich	18--
	UMMZ 91385	Cahaba River, AL		
	UMMZ 91382	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 65687	Buck Creek at Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65735	Cahaba River, Lily Shoals, 6 mi E of Blockton, Bibb Co., AL		
<i>Epioblasma othcaloogensis</i>	FLMNH 269072	Cahaba River, AL	C.T. Simpson	
	UMMZ 91261	Cahaba River, AL		
	UMMZ 65705	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
<i>Epioblasma penita</i>	ANSP 125917	Cahaba River, AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Epioblasma penita</i>	FLMNH 269075	Alabama River, Selma, Dallas Co., AL	C.T. Simpson	
	FLMNH 64320	Cahaba River, AL	E.R. Showalter	
	FLMNH 64321	Cahaba River, Bibb Co., AL	E.R. Showalter	
	FLMNH 64323	Cahaba River, Bibb Co., AL	R.E. Call	
	MFM 1927	Cahaba River, AL	A.F. Gray	1927
	MFM 13138	Cahaba River, Coldwell Ford site, 3.2 miles S of Cahaba Heights, Shelby Co., AL	H.D. Athearn	January 1, 1966
<i>Ferrissa fragilis</i>	FLMNH 230316	Little Cahaba River, 5 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
	FLMNH 230320	Little Cahaba River, 3 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
	FLMNH 230334	Little Cahaba River, 1.5 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
<i>Fusconaia cerina</i>	ANSP 127617	Cahaba River, Big Prairie Creek, AL		
	ANSP 179119	Cahaba River, Pyser, Bibb Co., AL	H.H. Smith and C. Goodrich	Aug. 1918
	FLMNH 3950	Cahaba River, near Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 47264	Cahaba River, Lily Shoals, 2 mi N Rt. 24, AL	H. Lee	October 11, 1981
	FLMNH 65283	Little Cahaba River, Bibb Co., AL	H.H. Smith	June 1916
	FLMNH 65126	Cahaba River, Piper, Bibb Co., AL	H.H. Smith	August 1, 1918
	FLMNH 229641	Cahaba River, Jefferson Co., AL	W.F. Webb	
	MFM 13128	Cahaba River, Caldwell Ford, 3.2 miles S of Cahaba Heights, Shelby Co., AL		January 1, 1966
	MFM 2675	Cahaba River, Lilly Shoals, 1 1/2 mile W of Piper, Bibb Co., AL		April 24, 1952
	MFM 2304	Cahaba River, 3 miles NNW of Fallistown, Shelby Co., AL		October 11, 1951
	OSUM 21940	Little Cahaba River, Cahaba Valley Church, Bibb Co., AL	D.H. Stansbery, H.D. Athearn	September 26, 1966

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Fusconaia cerina</i>	OSUM 27493	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27538	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 31925	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31968	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31980	Cahaba River, below US Rt. 82, Centerville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 31993	Cahaba River, at Pratts Ferry, Co. Rt. 27, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 31999	Cahaba River, at Pratts Ferry, Co. Rt. 27, Bibb Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32015	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32025	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32113	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32142	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32339	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 58614	Cahaba River, at AL Rt. 52, Shelby Co., AL	S.W. McGregor, T.E. Shepard	October 15, 1992
	UMMZ 58422	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 58356	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 58405	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58388	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 58445	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 113409	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 113412	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
	UMMZ 163868	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	1918
	UMMZ 130170	Cahaba River, 7 mi b/w Centerville, Bibb Co., AL		
	UMMZ 163887	Little Cahaba, Bibb Co., AL	H.H. Smith	1918

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Fusconaia cerina</i>	UMMZ 58397	Cahaba River, 5 mi NE of Conrad Marion, Perry Co., AL		
	UMMZ 113456	Cahaba River, Pratt's Landing, Bibb Co., AL	H.H. Smith	
	UMMZ 130168	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 130174	Cahaba River, 1 mi above Centerville, Bibb Co., AL	H. van der Schalie	September 6, 1935
	UMMZ 130176	Cahaba River, W of Sprott, Perry Co., AL		
	UMMZ 130175	Cahaba River, on Rd # 80, W of Selma, Dallas Co., AL		
	UMMZ 130172	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 130169	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 130173	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 130171	Cahaba River, Old Tuscaloosa Pike, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 58403	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 113449	Cahaba River, @ Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 58421	Cahaba River, 7 mi. NE of Centerville, Bibb Co., AL		
	UMMZ 54092	Cahaba River, Pratt's Ferry, Bibb Co., AL		
	UMMZ 113434	Cahaba River, Pratt's Ferry, Bibb Co., AL		
	UMMZ 112750	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 51304	Little Cahaba River, Bibb Co., AL		1916
	UMMZ 113476	Cahaba River, AL		
	UMMZ 92670	Cahaba River, AL		
	UMMZ 58389	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 92666	Cahaba River, Pratt's Ferry, Bibb Co., AL		
<i>Fusconaia ebena</i>	FLMNH 65102	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 68672	Alabama River, Selma, Dallas Co., AL		
	OSUM 27492	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 31924	Cahaba River, at island 300 yds above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Fusconaia ebena</i>	OSUM 31946	Cahaba River, at island 100 yds below US Rt. 80, Dallas Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31967	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32434	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 56748	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 56752	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 56949	Cahaba River, at US Rt. 80, Dallas Co., AL	J.C. Hall	July 5, 1993
	OSUM 56980	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 67772	Cahaba River, Sprott boat ramp, Perry Co., AL	Alabama Dept Conservation	August 21-22, 1991
	OSUM 74671	Cahaba River, Dallas Co., AL	H. McCullagh	August 22, 1998
	UMMZ 65786	Cahaba River, near Beloit, Dallas Co., AL		
	UMMZ 58374	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 58404	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58355	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 163923	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 65761	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
<i>Fusconaia rubida/cerina?</i>	OSUM 35445	Big Cedar Creek, AL Rt 41 bridge, 4 mi NE of Shepardsville, Dallas Co., AL	J.D. Williams and R. Grace	July 4, 1974
	OSUM 35217	Cedar Creek, @ Co. Rt. 63 bridge, 2.6 mi NE of Furman, Wilcox Co., AL	J.D. Williams and R. Grace	July 5, 1974
<i>Fusconaia undata</i>	UMMZ 92670	Cahaba River, AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Fusconaia</i> sp.	OSUM 25268	Buck Creek, Shelby Co., AL	collector unknown	prior to 1970
<i>Hamiota altilis</i>	ANSP 126054	Cahaba River, AL	Dr. Spillman	
	FLMNH 69187	Cahaba River, near Helena, AL	H.H. Smith	July 1, 1913
	FLMNH 65427	Cahaba River, near Piper, AL	H.H. Smith	June 12, 1916
	FLMNH 65411?	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	October 1912
	FLMNH 65412	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 65410	Cahaba River, near Henry Ellen, Jefferson Co., AL		October 1912
	MFM 20559	Little Cahaba River, Bulldog Bend, 3.6 km SSE of Piper, Bibb Co., AL	H.D. Athearn	August 31, 1969
	MFM 5677	Cahaba River, Rt.9, 9 mile ESE of Birmingham, Jefferson Co., AL	H.D. Athearn	September 3, 1955
	MFM 2308	Cahaba River, Bains Bridge, 8km NNE of Helena, Shelby Co., AL	H.D. Athearn	October 11, 1951
	MFM 13131	Cahaba River, Caldwell Ford site, 3.2 miles S of Cahaba Heights, Shelby Co., AL	H.D. Athearn	January 1, 1966
	MFM 14245	Little Cahaba River, Carlton Hill Church, 5.8 NW of Ashby, Bibb Co., AL	H.D. Athearn and D.H. Stansberry	
	MFM 20558	Little Cahaba River, Bulldog Bend, 3.6 km SSE of Piper, Bibb Co., AL	H.D. Athearn	August 31, 1969
	MFM 22826	Cahaba Valley Creek, at New Hope, 8.4 km NE of Helena, Shelby Co., AL	H.D. Athearn	August 24, 1971
	MFM 2306	Cahaba River, 3 miles NNW of Falliston, Shelby Co., AL	H.D. Athearn	October 11, 1951
	MFM 2318	Cahaba River, 1.5 miles NNW of Piper, Bibb Co., AL	H.D. Athearn and D.H. Stansberry	October 11, 1951
	OSUM 27505	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27600	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Hamiota altilis</i>	OSUM 31943	Cahaba River, at US Rt. 11 and RR, Trussville, Jefferson Co., AL	C.B. Stein	July 12, 1971
	OSUM 31989	Cahaba River, below US Rt. 82, Centerville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 31995	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32020	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32046	Little Cahaba River, at Co. Rt. 17, Shelby Co., AL	J.D. Williams	October 14, 1972
	OSUM 32051	Little Cahaba River, Leeds, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32064	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32087	Cahaba River, below US Rt. 78, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32099	Cahaba River, at Co. Rt. 10, St. Clair Co., AL	J.D. Williams	October 14, 1972
	OSUM 32125	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32157	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32294	Six Mile Creek, at AL Rt. 25, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32334	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32347	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	UMMZ 83873	Cahaba River, AL		
	UMMZ 83869	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 83971	Cahaba River, AL		
	UMMZ 83977	Cahaba River, near Henry Ellen, AL		
	UMMZ 83975	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
	UMMZ 83974	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 163888	Little Cahaba River, Bibb Co., AL		
	UMMZ 163859	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 65857	6 mile Creek, Sixmile, Bibb Co., AL	H. van der Schalie	September 6, 1935
	UMMZ 65856	Cahaba River, below dam of BWC, near Mertle, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65859	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Hamiota altilis</i>	UMMZ 65855	Cahaba River, Central RR of GA crossing, near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65854	Cahaba River, near Piper, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 65853	Cahaba River, at Lovick, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 58448	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65858	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65860	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 65861	Buck Creek, at Helena, Shelby Co., AL		
	UMMZ 65862	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65635	Little Cahaba River, overflow of BWC, 6 mi below Leeds., AL	H. van der Schalie	September 5, 1935
	UMMZ 83961	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 83968	Buck Creek, AL	R.E. Call	
	UMMZ 83967	Buck Creek, at Selma, Dallas Co., AL		
<i>Lampsilis ornata</i>	ANSP 100659	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	ANSP 48038	Cahaba River, Valley Creek, Toadvine, Jefferson Co., AL	B. Walker	1919
	FLMNH 174998	Little Cahaba River, Blair Camp, AL	J.H. Beal	
	FLMNH 65476	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	
	FLMNH 65481	Cahaba River, Lily Shoals, Bibb Co., AL	T.H. Aldrich	
	FLMNH 65438	Cahaba River, Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 65439	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 197852	Cahaba River, below Harrisburg, 1st island downstream, 7.5 mi SW Centreville, AL	M. Pierson, S. Puleo	July 28, 1990
	FLMNH 269571	Cahaba River, AL	R.E. Call	
	OSUM 21943	Little Cahaba River, Cahaba Valley Church, Bibb Co., AL	D.H. Stansbery, H.D. Athearn	September 26, 1966

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lampsilis ornata</i>	OSUM 27504	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27548	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 27599	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 31934	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31948	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31960	Cahaba River, 150 yards below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31977	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31988	Cahaba River, below US Rt. 82, Centerville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32003	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32038	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32063	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32095	Cahaba River, below Lovick, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32098	Cahaba River, at Co. Rt. 10, St. Clair, AL	J.D. Williams	October 14, 1972
	OSUM 32124	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32156	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32333	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32346	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32442	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 43410	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	prior to 1915
	OSUM 56714	Cahaba River, Centreville, Perry Co./Bibb Co., AL	S.W. McGregor, P. Hartfield, P.E. O'Neil	August 31- September 1, 1994
	OSUM 56720	Cahaba River, Centreville, Bibb Co., AL	S.W. McGregor, P.E. O'Neil	September 14, 1994

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lampsilis ornata</i>	OSUM 56725	Cahaba River, Perry Co./Bibb Co., AL	S.W. McGregor, P.E. O'Neil	September 15, 1994
	OSUM 56742	Cahaba River, at Jericho, Perry Co., AL	S. W. McGregor	September 13, 1994
	OSUM 56984	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 57661	Oakmulgee Creek, at AL Rt. 14, Dallas Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	OSUM 58616	Cahaba River, at AL Rt. 52, Shelby Co., AL	S.W. McGregor, T.E. Shepard	October 15, 1992
	OSUM 62456	Cahaba River, Perry Co., AL	P. Yokley, J. Selby, S. Jett	August 6, 1997
	OSUM 67778	Cahaba River, Sprott boat ramp, Perry Co., AL	AL Dept Conservation	August 21-22, 1991
	OSUM 74653	Cahaba River, US 80, Dallas Co., AL	H. McCullagh	September 10, 1995
	OSUM 74715	Cahaba River, Dallas Co., AL	H. McCullagh	August 22, 1998
	UMMZ 163857	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	UMMZ 84005	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 84008	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 83988	Cahaba River, AL		
	UMMZ 84013	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 84004	Buck Creek, Shelby Co., AL		
	UMMZ 65726	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65695	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65709	Cahaba River, old Tuscaloosa Pike crossing, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65684	Buck Creek, Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65672	Cahaba River, below dam of BWC near Mertle, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65663	Cahaba River, @ Grant's Mill, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65758	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 65749	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 65736	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lampsilis ornata</i>	UMMZ 65791	Cahaba River, on Rd # 80, W of Selma, Dallas Co., AL		
	UMMZ 65733	Cahaba River, W of Sprott, Perry Co., AL		
	UMMZ 65799	Cahaba River, W of Beloit, Dallas Co., AL		
	UMMZ 56732	Cahaba River, 1 mi N of Acton, Jefferson Co., AL		
	UMMZ 58376	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 58437	Cahaba River, Centerville, Bibb Co., AL		
	UMMZ 55394	Cahaba River, E of Marion Jct, Dallas Co., AL	H. van der Schalie	June 29, 1932
	UMMZ 58408	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58449	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 58424	Cahaba River, 2 mi NE of Centerville, Bibb Co., AL		
	UMMZ 58358	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 58392	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 65638	Cahaba River, Lovick, Jefferson Co., AL	H. van der Schalie	September 4, 1935
<i>Lampsilis clairbornensis</i>	UMMZ 65656	Cahaba River, Central RR of GA crossing, near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	ANSP 328036	Cahaba River, off Co. Rt. 10, Shelby Co., AL	Davis ?	July 15, 1972
	ANSP 179121	Cahaba River, Big Cedar Creek, near mouth of Dry Creek, Dallas Co., AL	R.L. Howard	1915
	FLMNH 269555	Cahaba River, AL	T.H. Aldrich	
	FLMNH 46974	Cahaba River, Lily Shoals, 2 mi NE of CR 24, Bibb Co., AL	H.G. Lee	October 11, 1981
	FLMNH 65329	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	MFM 22812	Cahaba River, above Patton Creek confluence, 7.5 km NNE, Helena, Shelby Co., AL		August 24, 1971
	MFM 13121	Cahaba River, Caldwell Ford, 3.2 miles S of Cahaba Heights, Shelby Co., AL		January 1, 1966
	OSUM 27503	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27547	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lampsilis claibornensis</i>	OSUM 27598	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 31976	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31987	Cahaba River, below US Rt. 82, Centerville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32012	Cahaba River, Shelby/Jefferson Cos., AL	J.D. Williams	October 13-14, 1972
	OSUM 32037	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32123	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32155	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 57660	Oakmulgee Creek, at AL Rt. 14, Dallas Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	OSUM 57665	Oakmulgee Creek, at AL Rt. 219, Perry Co./Dallas Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	OSUM 57982	Oakmulgee Creek, ford at Co. Rt. 30, Perry Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	OSUM 58615	Cahaba River, AL Rt. 52, Shelby Co., AL	S.W. McGregor, T.E. Shepard	October 15, 1992
	UMMZ 163860	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 83807	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 83934	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 83935	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 55395	Cahaba River, E of Marion, Dallas Co., AL	H. van der Schalie	June 29, 1932
	UMMZ 58391	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 58407	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58447	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65642	Cahaba River, at Lovick, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 65262	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 65731	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
<i>Lampsilis claibornensis</i>	UMMZ 65702	Cahaba River, Nunley Ford, W. of Helena, Shelby Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lampsilis teres</i>				
	ANSP 100689	Cahaba River, Gurnee, AL	H.H. Smith	
	ANSP 389199	Cahaba River, small tributary to Catawaba River, AL	R.T. Dillon	
	FLMNH 47271	Cahaba River, Suttle, Perry Co., AL	H.G. Lee	November 25, 1967
	FLMNH 22269	Cahaba River, pit 7.3, Perry Co., AL	Hynes	May 10, 1955
	FLMNH 65698	Cahaba River, near Marion, Perry Co., AL	Showalter	
	FLMNH 197848	Cahaba River, below Harrisburg, 1st island downstream, 7.5 mi SW of Centreville, Bibb Co., AL	M. Pierson, S. Puleo	July 28, 1990
	FLMNH 65745	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 65706	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	FLMNH 65751	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 9, 1912
	MFM 20578	Cahaba River, 0.4 km E of Heiberger, Perry Co., AL		August 31, 1969
	OSUM 27502	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27546	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 31933	Cahaba River, at island 300 yds above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31959	Cahaba River, 150 yds below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31975	Cahaba River, below Co. Rt. 14, Perry Co., AL	C. S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32011	Cahaba River, Shelby/Jefferson Co., AL	J.D. Williams	October 13-14, 1972
	OSUM 32036	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32062	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32094	Cahaba River, below Lovick, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32122	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32154	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32441	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lampsilis teres</i>	OSUM 56713	Cahaba River, Centreville, Perry/Bibb Co.,	S.W. McGregor, P. Hartfield, P.E. O'Neil	September 1, 1994
	OSUM 56724	Cahaba River, Perry/Bibb Co.,	S.W. McGregor, P.E. O'Neil	September 15, 1994
	OSUM 56759	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil	September 20, 1994
	OSUM 56950	Cahaba River, at US Rt. 80, Dallas Co., AL	John C. Hall	July 5, 1993
	OSUM 56983	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 62455	Cahaba River, Perry Co., AL	P. Yokley, J. Selby, S. Jett	August 6, 1997
	OSUM 67777	Cahaba River, Sprott boat ramp, Perry Co., AL	AL Dept Conservation	August 21-22, 1991
	OSUM 27597	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 32440	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	UMMZ 83094	Cahaba River, at Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 83099	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 163907	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 58436	Cahaba River, at Centerville, Bibb Co., AL		
	UMMZ 58375	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 58423	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 58357	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 58353	Cahaba River, 12 mi SSW of Selma, Dallas Co., AL		
	UMMZ 85390	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 58406	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58446	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65667	Cahaba River, Grant's Mill, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65670	Cahaba River, below dam of Birmingham Water Company near Mertle, Jefferson Co., AL		
	UMMZ 65681	Cahaba River, 1 mi above Centerville, Bibb Co., AL	H. van der Schalie	September 6, 1935
	UMMZ 65701	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lampsilis teres</i>	UMMZ 65766	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 65713	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL		
	UMMZ 65750	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 65793	Cahaba River, US 82 Bridge, W of Selma, Dallas Co., AL		
	UMMZ 65782	Cahaba River, near Beloit, Dallas Co., AL		
	UMMZ 65725	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
<i>Lasmögona alabamensis</i>	FLMNH 65809	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 9, 1912
	FLMNH 197849	Cahaba River, below Harrisburg, 1st island downstream, 7.5 mi SW of Centreville, Bibb Co., AL		July 28, 1990
	OSUM 27489	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 31962	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32108	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32137	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32326	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 56706	Cahaba River, Centreville, Perry/Bibb Co., AL	S.W. McGregor, P. Hartfield, P.E. O'Neil	August 31- September 1, 1994
	OSUM 56715	Cahaba River, Centreville, Bibb Co., AL	S.W. McGregor, P.E. O'Neil	September 14, 1994
	OSUM 56753	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil	September 20, 1994
	OSUM 56976	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 74655	Cahaba River, US 80, Dallas Co., AL	H. McCullagh	July 3, 1998
	UMMZ 65770	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 65770	Cahaba River, 7 mi below Centerville, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lasmigona alabamensis</i>	UMMZ 65729	Cahaba River, at Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 105418	Cahaba River, at Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 65698	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
<i>Lasmigona costata</i>	OSUM 31941	Cahaba River, at US Rt. 11 and RR, Trussville, Jefferson Co., AL	C.B. Stein	July 12, 1971
<i>Lasmigona etowaensis</i>	ANSP 100571	Cahaba River, Mill Creek, Shelby Co., AL	H.H. Smith	
	FLMNH 65384	Cahaba River, near Leeds, Jefferson Co., AL	H.H. Smith	August 1912
	FLMNH 65880	Montevallo, Shelby Co., AL	T.H. Aldrich	
	MFM 22824	Cahaba Valley Creek, New Hope, 8.4 km NE of Helena, Shelby Co., AL	H.D. Athearn	August 24, 1971
	MFM 20546	Little Cahaba River, Bulldog Bend, 3.6 km SSE of Piper, Bibb Co., AL	H.D. Athearn	August 31, 1969
	UMMZ 58372	Little Cahaba River, 2 mi NE of Leeds, Jefferson Co., AL		
	UMMZ 65630	Little Cahaba River, 4 mi S of Leeds, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 65636	Little Cahaba River, overflow of Birmingham Water Cp., 6 mi below Leeds, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 67748	Clear Creek, Montevallo, Shelby Co., AL		
	UMMZ 65628	Little Cahaba River, 2 mi above Leeds, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 65623	Little Cahaba River, 1 mi S of Leeds, Jefferson Co., AL	H. van der Schalie	September 4, 1935
<i>Leptodea fragilis</i>	FLMNH 65967	Cahaba River, AL	Showalter	
	FLMNH 65925	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 9, 1912
	FLMNH 65922	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Leptodea fragilis</i>	FLMNH 197844	Cahaba River, below Harrisburg, 1st island downstream, 7.5 mi SW of Centreville, Bibb Co., AL	M. Pierson, S. Puleo	July 28, 1990
	FLMNH 229250	Cahaba River, Lily Shoals, Jefferson Co., AL	Beal	October 1933
	FLMNH 197841	Cahaba River, 6.9 mi NNE of Marion, near Town Creek confluence, Perry Co., AL	M. Pierson	July 8, 1985
	OSUM 27498	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27542	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 31930	Cahaba River, at island 300 yds above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31956	Cahaba River, above US Rt. 31, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32032	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32149	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32329	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32342	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32439	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 56711	Cahaba River, Centreville, Perry Co./Bibb Co., AL	S.W. McGregor, P. Hartfield, P.E. O'Neil	August 31- September 1, 1994
	OSUM 56757	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil	September 20, 1994
	OSUM 62454	Cahaba River, Perry Co., AL	P. Yokley, J. Selby, S. Jett	August 6, 1997
	UMMZ 65714	Cahaba River, Old Tuscaloosa Pike, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65776	Cahaba River, West of Sprott, Perry Co., AL		
	UMMZ 65744	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 65792	Cahaba River, Rd # 80, W of Selma, Dallas Co., AL		
	UMMZ 58409	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 65693	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 65753	Cahaba River, 7 mi below Centerville, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Leptodea fragilis</i>	UMMZ 58450	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65784	Cahaba River, near Beloit, Dallas Co., AL		
	UMMZ 65720	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 79601	Cahaba River, AL		
	UMMZ 163864	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
<i>Ligumia recta</i>	FLMNH 64605	Alabama River, Selma, Dallas Co., AL	T.H. Aldrich	
	FLMNH 64599	Cahaba River, Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	FLMNH 66108	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	OSUM 27500	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 31974	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32010	Cahaba River, Shelby/Jefferson Co., AL	J.D. Williams	October 13-14, 1972
	OSUM 32151	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	UMMZ 55478	Cahaba River, at Pratt's Ferry, Bibb Co., AL		
	UMMZ 98293	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 656991	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 58410	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58425	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 163858	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
<i>Ligumia subrostrata</i>	UMMZ 89619	Coffee Creek, AL		
<i>Medionidus acutissimus</i>	ANSP 339061	Cahaba River, AL		
	ANSP 126377	Cahaba River, Shoal Creek, Montevallo, AL	C.M. Wheatley Collection	
	ANSP 89020	Cahaba River, Buxahatchee Creek near junction with Warsaw Creek, AL	H.H. Smith	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Medionidus acutissimus</i>	ANSP 48105	Cahaba River, Shoal Creek, Montevallo, AL	B. Walker (T.H. Aldrich)	1919
	ANSP 218984	Cahaba River, Lilly Shoals, Bibb Co., AL	R.E. Call ex. W.J. Clench	
	FLMNH 269734	Cahaba River, AL	R.E. Call	
	FLMNH 66156	Cahaba River, near Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	FLMNH 66177	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	October 1912
	MFM 2327	Cahaba River, 1.5 miles NNW of Piper, Bibb Co., AL	H.D. Ahearn, D.R. Ahearn	October 11, 1951
	MFM 13139	Cahaba River, Caldwell Ford site, 3.2 miles S of Cahaba Heights, Shelby Co., AL	H.D. Ahearn	January 1, 1966
	MFM 14247	Little Cahaba River, Carlton Hill Church, 5.8 km NW of Ashby, Bibb Co., AL	H.D. Ahearn, D.H. Stansberry	September 26, 1966
	UMMZ 98493	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 98492	Shoal Creek, at Montevallo, Shelby Co., AL		
	UMMZ 98491	Cahaba River, Gurnee, Shelby Co., AL		
	UMMZ 98483	Buck Creek, Shelby Co., AL		
	UMMZ 98480	Cahaba River, AL		
	UMMZ 58451	Cahaba River, Lily Shoals, 6 mi S of Blocton, Bibb Co., AL		
	UMMZ 58393	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 58359	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 98497	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 98496	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 130153	Cahaba River, Central RR of GA crossing, near Henry Ellen, Jefferson Co., AL		
	UMMZ 130154	Cahaba River, Grant's Mill, Jefferson Co., AL		
	UMMZ 130155	Cahaba River, below dam of Birmingham Water Co., near Mertle, Jefferson Co., AL		
	UMMZ 130156	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 130157	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 130158	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Medionidus acutissimus</i>	UMMZ 255271	Cahaba River, Bibb Co., AL		
<i>Medionidus parvulus</i>	AMNH 127838	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 66189	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 66206	Cahaba River, Bibb Co., AL	R.E. Call	
	FLMNH 229350	Cahaba River, Centreville, Bibb Co., AL	Beal	
	FLMNH 2260	Cahaba River, AL		
	MFM 127838	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	MFM 1842	Cahaba River, Lily Shoals, Bibb Co., AL		
	OSUM 20850	Cahaba River, AL	J. Lewis	18--
	OSUM 27594	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 32060	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32292	Six Mile Creek, at AL Rt. 25, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 38081	Shoal Creek, Montevallo, Shelby Co., AL	collector unknown	18--
	OSUM 38082	Shoal Creek, Montevallo, Shelby Co., AL	collector unknown	18--
	OSUM 50094	Cahaba River, AL	collector unknown	prior to Jan 1931
	OSUM 50095	Cahaba River, AL	collector unknown	prior to Jan 1931
	OSUM 68346	Cahaba River, AL	R.E. Call	18--
	UMMZ 193339	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	UMMZ 163902	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	UMMZ 163885	Buck Creek, Helena, Shelby Co., AL		
	UMMZ 98458	Cahaba River, AL		
	UMMZ 98463	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 232428	Cahaba River, Bibb Co., AL		
<i>Megalonaia nervosa</i>	ANSP 328037	Cahaba River, Shelby Co., AL	Davis ?	July 14, 1972
	FLMNH 66232	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 66281	Cahaba River, Bibb Co., AL	T.H. Aldrich	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Megalonaias nervosa</i>	FLMNH 66234	Alabama River, Selma, Dallas Co., AL	T.H. Aldrich	
	OSUM 38031	Cahaba River, AL	collector unknown	18--
	UMMZ 58411	Cahaba River, 7 mi E of Harrisburg, Bibb Co., AL		
<i>Obliquaria reflexa</i>	FLMNH 66314	Cahaba River, AL		
	FLMNH 47263	Cahaba River, Lily Shoals, 2 mi N Rt 24, Bibb Co., AL	H.G. Lee	October 11, 1981
	FLMNH 66290	Alabama River, Selma, Perry Co., AL	R.E. Call	
	FLMNH 293424	Cahaba River, 300 m above US 80 bridge, 9 mi W of Selma, Perry Co., AL	H. McCullagh, C. Lydard	
	FLMNH 66312	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 197845	Cahaba River, below Harrisburg, 1st island downstream, 7.5 mi SW of Centreville, Perry Co., AL	M. Pierson, S. Puleo	
	FLMNH 197842	Cahaba River, 6.9 mi NNE of Marion, near Town Creek confluence, AL	M. Pierson	June 8, 1985
	OSUM 27495	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 31928	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31954	Cahaba River, 150 yards below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31970	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32118	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32436	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 56709	Cahaba River, Centreville, Perry Co./Bibb Co., AL	S. W. McGregor, P. Hartfield, P.E. O'Neil	August 31 - September 1, 1994
	OSUM 56722	Cahaba River, Perry Co./Bibb Co., AL	S. W. McGregor, P.E. O'Neil	September 15, 1994
	OSUM 56756	Cahaba River, Perry Co., AL	S. W. McGregor, P.E. O'Neil	September 20, 1994
	OSUM 56827	Cahaba River, Perry Co., AL	S. W. McGregor, P.E. O'Neil	September 20, 1994

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Obliquaria reflexa</i>	OSUM 56965	Cahaba River, at RR, Dallas Co., AL	J.C. Hall	June 23, 1993
	OSUM 56981	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 67774	Cahaba River, Sprott boat ramp, Perry Co., AL	AL Dept Conservation	August 21-22, 1991
	UMMZ 65752	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 65742	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 65734	Cahaba River, Lily Shoals, 6 mi E of Blockton, Bibb Co., AL		
	UMMZ 58413	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58427	Cahaba River, 7 mi E of Centerville, Bibb Co., AL		
	UMMZ 65715	Cahaba River, old Tuscaloosa Pike crossing, Shelby Co., AL		
	UMMZ 58394	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 58361	Cahaba River, 10 mi N of Selma, Dallas Co., AL		
	UMMZ 65795	Cahaba River, on CR 80 W of Selma, Dallas Co., AL		
	UMMZ 65755	Cahaba River, W of Sprott, Perry Co., AL		
	UMMZ 65768	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
<i>Obovaria jacksoniana</i>	OSUM 32148	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	UMMZ 107508	Cahaba River, Pratts Ferry, Bibb Co., AL		
<i>Obovaria unicolor</i>	ANSP 164904	Cahaba River, 10 miles W of Selma, Dallas Co., AL	W.J. Clench and H. Vander Schalie	
	OSUM 27497	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 31929	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31955	Cahaba River, 150 yards below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Obovaria unicolor</i>	OSUM 31972	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32001	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32438	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 56719	Cahaba River, Centreville, Bibb Co., AL	S. W. McGregor, P.E. O'Neil	September 14, 1994
	OSUM 56723	Cahaba River, Perry/Bibb Co., AL	S. W. McGregor, P.E. O'Neil	September 15, 1994
	OSUM 56746	Cahaba River, Perry Co., AL	S. W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 56749	Cahaba River, Perry Co., AL	S. W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 57275	Cahaba River, Perry Co., AL	S.W. McGregor	September 15, 1994
	UMMZ 58395	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 58379	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 65757	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 58362	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 55472	Cahaba River, E of Marion Jct., Dallas Co., AL	H. van der Schalie	June 29, 1932
	UMMZ 55397	Cahaba River, E of Marion Jct., Dallas Co., AL	H. van der Schalie	June 29, 1932
	UMMZ 106298	Cahaba River, Bibb Co., AL		
	UMMZ 106246	Cahaba River, Pratt's Ferry, Bibb Co., AL		
	UMMZ 65771	Cahaba River, W of Sprott, Perry Co., AL		
	UMMZ 65746	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 65790	Cahaba River, on Rd # 80, W of Selma, Dallas Co., AL		
	UMMZ 65788	Cahaba River, near Beloit, Dallas Co., AL		
<i>Plecotmerus dombeyana</i>	FLMNH 66440	Alabama River, Selma, Dallas Co., AL		
	OSUM 56977	Cahaba River, Perry Co., AL	S. W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Pleurobema decisum</i>	AMNH 30656	Cahaba River, AL		
	AMNH 30669	Cahaba River, AL		
	ANSP 97833	Cahaba River, Canoe Creek, AL	H.H. Smith	
	ANSP 100638	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	ANSP 129865	Cahaba River, AL	E.R. Showalter	
	ANSP 48407	Cahaba River, AL	E.R. Showalter Collection (B. Walker)	
	ANSP 127322	Cahaba River, AL		
	ANSP 100642	Cahaba River, Gurnee, AL	H.H. Smith	
	ANSP 129863	Cahaba River, AL	E. R. Showalter	
	ANSP 118408	Cahaba River, AL	L. Brewer Hall	1918
	ANSP 127319	Cahaba River, AL		
	FLMNH 66552	Cahaba River, AL	E.R. Showalter	
	FLMNH 66543	Cahaba River, AL	T.H. Aldrich	
	FLMNH 269861	Cahaba River, AL	C.T. Simpson	
	FLMNH 66555	Cahaba River, Helena, Shelby Co., AL	H.H. Smith	1 July 1913
	FLMNH 66674	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 197847	Cahaba River, below Harrisburg, 7.5 SW of Centreville, AL	M. Pierson, S. Puleo	28 July 1990
	FLMNH 66656	Little Cahaba River, Bibb Co., AL	H.H. Smith	June 1916
	FLMNH 229625	Cahaba River, Lily Shoals, Bibb Co., AL	H.H. Smith	
	FLMNH 66774	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	MFM 30650	Cahaba River, AL		
	MFM 30669	Cahaba River, AL		
	MFM 334	Cahaba River, AL	H.D. Athearn	
	OSUM 31981	Cahaba River, below US Rt. 82, Centerville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32007	Cahaba River, Shelby/Jefferson Co., AL	J.D. Williams	October 13-14, 1972
	OSUM 32026	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	UMMZ 22772	Cahaba River, AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Pleurobema decisum</i>	UMMZ 58428	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 163865	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 163894	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 81704	Cahaba River, AL		
	UMMZ 235068	Cahaba River, Bibb Co., AL		
	UMMZ 81727	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 128897	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 128896	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 80837	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 80833	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 81464	Cahaba River, Pratt's Ferry, Bibb Co., AL		
	UMMZ 81452	Cahaba River, at Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 51279	Cahaba River, near Helena, Shelby Co., AL		
	UMMZ 79735	Cahaba River, AL		
	UMMZ 81462	Cahaba River, AL		
	UMMZ 128894	Cahaba River, old Tuscaloosa Pike crossing, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 80832	Cahaba River, Wild Cat Island, Bibb Co., AL		
	UMMZ 81720	Cahaba River, at Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 128893	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 128898	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 157163	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	1912
	UMMZ 80831	Cahaba River, Pine Island, near Ardela, Bibb Co., AL	H.E. Wheeler	
	UMMZ 80826	Buck Creek, Montevallo, Shelby Co., AL		
	UMMZ 12885	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 163871	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
<i>Pleurobema perovatum</i>	ANSP 129870	Cahaba River, AL	E.R. Showalter	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Pleurobema perovatum</i>	ANSP 89025	Cahaba River, Helena, AL	H.H. Smith	
	ANSP 127329	Cahaba River, AL		
	FLMNH 269834	Cahaba River, AL		
	FLMNH 269850	Cahaba River, AL		
	FLMNH 269851	Cahaba River, AL		
	FLMNH 269844	Cahaba River, Lily Shoals, Bibb Co., AL	H.H. Smith	
	FLMNH 66475	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 66779	Cahaba River, AL		
	FLMNH 66772	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 66778	Little Cahaba River, Bibb Co., AL	H.H. Smith	June 1916
	FLMNH 66773	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 67032	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	August 1912
	FLMNH 229642	Cahaba River, Jefferson Co., AL	Beal	
	FLMNH 67033	Cahaba River, near Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	FLMNH 67031	Buck Creek, Helena, Shelby Co., AL	T.H. Aldrich	
	FLMNH 67034	Cahaba River, Lily Shoals, Bibb Co., AL	T.H. Aldrich	
	MFM 326	Cahaba River, AL	J.R. Miller	
	MFM 13141	Cahaba River, Caldwell Ford site, 5.2 km S of Cahaba Heights, Shelby Co., AL	H.D. Athearn	January 1, 1966
	MFM 2311	Cahaba River, 3 miles NNW of Falliston (Lilly Shoals), Shelby Co., AL		
	OSUM 32027	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32028	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32048	Little Cahaba River, Leeds, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32114	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32143	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 38215	Cahaba River, AL	R.E. Call	18--
	OSUM 38216	Cahaba River, AL	E.R. Showalter	18--

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
	OSUM 67811	Cahaba River, AL	R.E. Call	1885
<i>Pleurobema perovatum</i>	UMMZ 9535	Cahaba River, Grants Mill, Jefferson Co., AL		
	UMMZ 30579	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 128899	Cahaba River, Central RR of GA crossing near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 15, 1935
	UMMZ 80881	Cahaba River, AL		
	UMMZ 80873	Cahaba River, AL		
	UMMZ 80828	Cahaba River, Helena, Shelby Co., AL		
	UMMZ 227700	Cahaba River, AL		
	UMMZ 58364	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 80894	Cahaba River, Bibb Co., AL		
	UMMZ 81001	Montevallo, Shelby Co., AL		
	UMMZ 80891	Cahaba River, AL		
	UMMZ 81012	Buck Creek, Shelby Co., AL		
	UMMZ 79651	Montevallo Creek, AL		
	UMMZ 16208	Cahaba River, AL		
	UMMZ 79657	Cahaba River, AL		
	UMMZ 79658	Buck Creek, AL		
	UMMZ 79652	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 164148	Cahaba River, at Marion, Perry Co., AL	R. Howard	May 1916
	UMMZ 79654	Cahaba River, Pine Island near Ardela, Bibb Co., AL	H.E. Wheeler	
	UMMZ 163893	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 80792	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	UMMZ 163892	Cahaba River, 2 mi N of Helena, Shelby Co., AL		
	UMMZ 81019	Buck Creek, at Montevallo, Shelby Co., AL		
	UMMZ 58380	Cahaba River, 0.5 mi S of Felix, Dallas Co., AL		
	UMMZ 128907	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 80811	Cahaba River, Lily Shoals, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Pleurobema perovatum</i>	UMMZ 153970	Cahaba River, AL		
	UMMZ 81021	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 81022	Cahaba River, AL		
	UMMZ 153975	Cahaba River, AL		
	UMMZ 163879	Buck Creek, Helena, Shelby Co., AL		
	UMMZ 163869	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 54123	Cahaba River, Little Shoals, Bibb Co., AL		
	UMMZ 80854	Buck Creek, AL		
	UMMZ 80879	Cahaba River, Little Shoals, Bibb Co., AL		
	UMMZ 81018	Cahaba River, AL		
	UMMZ 81020	Cahaba River, AL		
	UMMZ 81023	Buck Creek, Selma, Dallas Co., AL		
	UMMZ 80808	Cahaba River, AL		
<i>Pleurobema rubellum</i>	AMNH 30690	Cahaba River, AL		
	AMNH 30687	Cahaba River, AL		
	ANSP 365812	Cahaba River, AL	ex. Alfred University	
	ANSP 365811	Cahaba River, AL	ex. Alfred University	
	ANSP 41429	Cahaba River, AL	E.R. Showalter	
	ANSP 129870	Cahaba River, AL	E.R. Showalter	
	FLMNH 66777	Cahaba River, AL	Showalter	
	FLMNH 66772	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 229626	Cahaba River, Jefferson Co., AL	Beal	
	FLMNH 66765	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 269960	Cahaba River, Lily Shoals, Bibb Co., AL	H.H. Smith	
	FLMNH 67023	Buck Creek, Shelby Co., AL	R.E. Call	
	FLMNH 3992	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 67551	Little Cahaba River, Bibb Co., AL	H.H. Smith	June 1916

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Pleurobema rubellum</i>	FLMNH 67552	Cahaba River, near Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	MFM 13140	Cahaba River, Caldwell Ford site, 3.2 miles S of Cahaba Heights, Shelby Co., AL	H.D. Athearn	January 1, 1966
	MFM 30690	Cahaba River, AL		
	MFM 30687	Cahaba River, AL		
	OSUM 68947	Cahaba River, AL	collector unknown	18--
	UMMZ 10156	Cahaba River, Pine Island, Bibb Co., AL		
	UMMZ 54063	Cahaba River, Little Shoals, Bibb Co., AL		
	UMMZ 81056	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
	UMMZ 153977	Cahaba River, AL		
	UMMZ 81055	Buck Creek, Shelby Co., AL		
	UMMZ 54063	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 81049	Cahaba River, AL		
	UMMZ 163883	Buck Creek, Helena, Shelby Co., AL		
	UMMZ 81053	Cahaba River, AL	R.E. Call	
	UMMZ 80824	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 81027	Cahaba River, AL		
	UMMZ 54126	Cahaba River, Little Shoals, Bibb Co., AL		
	UMMZ 80823	Cahaba River, AL		
	UMMZ 128906	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL		
	UMMZ 128904	Cahaba River, below dam of Birmingham Water Co., near Mertle, Jefferson Co., AL		
	UMMZ 163882	Buck Creek, at Helena, Shelby Co., AL		
	UMMZ 163870	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 128905	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 51299	Cahaba River, near Piper, Bibb Co., AL		
	UMMZ 80864	Buck Creek, AL		
	UMMZ 92780	Cahaba River, AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Pleurobema stable</i>	FLMNH 67049	Cahaba River, AL	E.R. Showalter	
	OSUM 20852	Cahaba River, AL		
	OSUM 1913	Cahaba River, AL		
<i>Pleurobema taitianum</i>	UMMZ 55473	Cahaba River, E of Marion Jct., Dallas Co., AL		
<i>Potamilus inflatus</i>	UMMZ 107938	Alabama River, Selma, Dallas Co., AL		
	UMMZ 107938	Alabama River, Selma, Dallas Co., AL		
<i>Potamilus ohiensis</i>	OSUM 69549	Cahaba River, Perry Co., AL	P. Kilpatrick, B. Reeves	1991-1992?
<i>Potamilus purpuratus</i>	ANSP 100651	Cahaba River, Gurnee, AL	H.H. Smith	
	ANSP 328032	Cahaba River, Shelby Co., AL	G. Davis	July 14, 1972
	ANSP 47857	Cahaba River, AL	B. Walker and R.E. Call	1919
	FLMNH 67616	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 9, 1912
	FLMNH 208954	Cahaba River, 6.2 mi NE Centreville at CR 26, AL	M. Pierson	May 8, 1993
	FLMNH 47267	Cahaba River, Lily Shoals, 2 mi N Rt 24, Bibb Co., AL	H.G. Lee	October 11, 1981
	FLMNH 67622	Cahaba River, Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 197853	Cahaba River, below Harrisburg, 1st island downstream, 7.5 mi SW of Centreville, Perry Co., AL		
	FLMNH 67623	Alabama River, Selma, Dallas Co., AL	T.H. Aldrich	
	OSUM 21941	Little Cahaba River, Cahaba Valley Church, Bibb Co., AL	D.H. Stansberry, H.D. Athearn	September 26, 1966
	OSUM 27499	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27543	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 31931	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Potamilus purpuratus</i>	OSUM 31957	Cahaba River, 150 yards below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31973	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31985	Cahaba River, below US Rt. 82, Centreville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32009	Cahaba River, Shelby/Jefferson Co., AL	J.D. Williams	October 13-14, 1972
	OSUM 32018	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32033	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32119	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32150	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32330	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32343	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 56712	Cahaba River, Centreville, Perry/Bibb Co., AL	S.W. McGregor, P. Hartfield, P.E. O'Neil	August 31- September 1, 1994
	OSUM 56828	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil	September 20, 1994
	OSUM 67776	Cahaba River, Sprott boat ramp, Perry Co., AL	AL Dept. Conservation	August 21-22, 1991
	UMMZ 65739	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 58438	Cahaba River, at Centerville, Bibb Co., AL		
	UMMZ 58398	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 65680	Cahaba River, 1 mi above Centerville, Bibb Co., AL		
	UMMZ 58455	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 58365	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 65765	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 79401	Cahaba River, AL	R.E. Call	
	UMMZ 65697	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 58416	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58429	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 65718	Cahaba River, at Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Potamilus purpuratus</i>	UMMZ 55429	Cahaba River, Pratts Ferry, 6 mi SE of Blocton, Bibb Co., AL		
	UMMZ 65671	Cahaba River, below dam of Birmingham Water Co. near Mertle, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 163904	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 79606	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 79419	Cahaba River, at Gurnee, Shelby Co., AL		
<i>Potamilus sp.</i>	OSUM 69550	Cahaba River, Perry Co., AL	P. Kilpatrick, B. Reeves	1991-1992
<i>Ptychobranchus greenii</i>	ANSP 341236	Cahaba River, Lilly Shoals, AL	ex. Marvintyett	
	ANSP 100624	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	FLMNH 66536	Little Cahaba River, AL	H.H. Smith	June 1916
	FLMNH 67703	Cahaba River, Cahaba River, Piper, Bibb Co., AL	H.H. Smith	August 1915
	FLMNH 67731	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 67666	Cahaba River, Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	FLMNH 67726	Cahaba River, Henry Ellen, AL	H.H. Smith	October 1912
	FLMNH 67692	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 67717	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 9, 1912
	MFM 2301	Cahaba River, 3 miles NNW of Falliston, Shelby Co., AL	H.D. Athearn	October 11, 1951
	MFM 5683	Cahaba River, Rt.9, miles ESE of Birmingham, Jefferson Co., AL	H.D. Athearn	September 3, 1955
	MFM 13142	Cahaba River, Caldwell Ford site, 3.5 miles S of Cahaba Heights, Shelby Co., AL	H.D. Athearn	January 1, 1966
	MFM 2426	Cahaba River, AL	B. Walker (ex. MCZ - Lewis Collection	1907
	MFM 2419	Cahaba River, Lilly Shoals, Bibb Co., AL	A.F. Gray	
	MFM 13143	Cahaba River, Caldwell Ford site, 3.2 miles S of Cahaba Heights, Shelby Co., AL	H.D. Athearn	January 1, 1966

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Ptychobranchus greenii</i>	MFM 20552	Cahaba River, Bulldog Bend, SSE of Piper, Bibb Co., AL	H.D. Athearn	August 31, 1969
	OSUM 18600	Cahaba River, AL	J. Lewis	18--
	OSUM 18911	Cahaba River, AL	T.H. Aldrich	18--
	OSUM 27541	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 27592	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 31984	Cahaba River, below US Rt. 82, Centreville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32031	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32059	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32117	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32147	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 38034	Cahaba River, Shelby Co., AL	T.H. Aldrich	18--
	OSUM 38036	Cahaba River, Shelby Co., AL	T.H. Aldrich	18--
	OSUM 50084	Cahaba River, AL	collector unknown	prior to Jan 1931
	OSUM 57854	Cahaba River, AL	collector unknown	18--
	UMMZ 58439	Cahaba River, at Centerville, Bibb Co., AL		
	UMMZ 54419	Cahaba River, at Henry Ellen, Jefferson Co., AL		
	UMMZ 74088	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 74090	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
	UMMZ 74092	Cahaba River, Wild Cat Island, Bibb Co., AL		
	UMMZ 74093	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 74095	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 74096	Cahaba River, Pratt's Ferry, Bibb Co., AL		
	UMMZ 130161	Cahaba River, at Grant's Mill, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 130159	Cahaba River, at Lovick, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 130160	Cahaba River, Central RR of GA crossing near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 130162	Cahaba River, below dam of Birmingham Water Co., near Mertle, Jefferson Co., AL	H. van der Schalie	September 5, 1935

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Ptychobranchus greenii</i>	UMMZ 130163	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 130164	Cahaba River, old Tuscaloosa Pike crossing, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 130166	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 130165	Cahaba River, at Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 74108	Cahaba River, Pratt's Ferry, Bibb Co., AL		
	UMMZ 74105	Cahaba River, AL		
	UMMZ 163867	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 130167	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 206721	Cahaba River, AL		
	UMMZ 163871	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
<i>Pyganodon grandis</i>	ANSP 126604	Cahaba River, Big Prairie Creek, AL		
	FLMNH 64032	Alabama River, Praire Bluff, Dallas Co., AL	E.R. Showalter	
<i>Quadrula apiculata</i>	ANSP 179117	Cahaba River, near Pyser, Bibb Co., AL	C. Goodrich	
	ANSP 401856	Cahaba River, Valley Creek, Toadvine, Jefferson Co., AL	B. Walker	1919
	FLMNH 243993	Alabama River, 12 mi SW of Camden, Millers Ferry Reservoir, W.H. McCullagh Rt 28, Wilcox Co., AL		July 15, 1989
	MFM 2319	Cahaba River, 2.4 km NNW of Piper, Bibb Co., AL		October 11, 1951
	OSUM 27536	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 31920	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31951	Cahaba River, 150 yards below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31964	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32431	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 56740	Cahaba River, at Jericho, Perry Co., AL	S.W. McGregor	September 13, 1994

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Quadrula apiculata</i>	OSUM 56754	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil	September 20, 1994
	UMMZ 76878	Cahaba River, at Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 163856	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 76878	Cahaba River, at Pratt's Ferry, Bibb Co., AL		
<i>Quadrula asperata</i>	ANSP 179118	Cahaba River, Bibb Co., AL	H.H. Smith and C. Goodrich	Aug. 1918
	ANSP 163038	Cahaba River, 10 miles W of Selma, AL	W.J. Clench and H. van der Schalie (ex MCZ 1934)	
	FLMNH 233298	Cahaba River, pit 7.3, Perry Co., AL	Hynes	May 5, 1955
	FLMNH 68831	Cahaba River, Alabama River, AL	T.H. Aldrich	
	FLMNH 68902	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 68875	Little Cahaba River, Bibb Co., AL	H.H. Smith	June 1, 1916
	FLMNH 47266	Cahaba River, Lily Shoals, 2 mi N, CR 24, Bibb Co., AL	H.G. Lee	October 11, 1981
	FLMNH 3477	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 197846	Cahaba River, below Harrisburg, 1st island downstream, SW Centreville, Perry Co., AL	M. Pierson, S. Puleo	July 28, 1990
	FLMNH 68853	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	October 1, 1912
	FLMNH 68838	Cahaba River, 8 mi N of Sprott, Perry Co., AL	H.H. Smith	
	FLMNH 197840	Cahaba River, 6.9 mi NNE of Marion, near Town Creek confluence, Perry Co., AL	M. Pierson	June 8, 1985
	FLMNH 68903	Cahaba River, near Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	MFM 13136	Cahaba River, Caldwell Ford, 3.2 miles S of Cahaba Heights, Shelby Co., AL		January 1, 1966
	MFM 2310	Cahaba River, 3 miles NNW of Falliston, Shelby Co., AL		October 11, 1951
	MFM 14240	Little Cahaba River, Carlton Hill Church, 5.8 km NW of Ashby, Bibb Co., AL	H.D. Athearn and D.H. Stansberry	August 12, 1969

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Quadrula asperata</i>	OSUM 278	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	W.N. Kasson, G.T. Watters	July 29, 1986
	OSUM 27490	Cahaba River, above US Rt. 82/AL Rt. 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27589	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 31922	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31937	Cahaba River, Shelby Co., AL	J.S. Ramsey, D. Mathur	May 16, 1970
	OSUM 31945	Cahaba River, at island 300 yards below US Rt. 80, Dallas Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31952	Cahaba River, 150 yards below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31966	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 31979	Cahaba River, below US Rt. 82, Centreville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 31992	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 31997	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32013	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, AL	C.S. Baldwin	November 5, 1972
	OSUM 32023	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32056	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32083	Cahaba River, below US Rt. 78, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32091	Cahaba River, below Lovick, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32111	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32140	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32327	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32338	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32433	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Quadrula asperata</i>	OSUM 56708	Cahaba River, Centreville, Perry/Bibb Co., AL	S.W. McGregor, P. Hartfield, P.E. O'Neil	August 31 - September 1, 1994
	OSUM 56716	Cahaba River, Centreville, Bibb Co., AL	S.W. McGregor, P.E. O'Neil	September 14, 1994
	OSUM 56721	Cahaba River, Perry/Bibb Co., AL	S.W. McGregor, P.E. O'Neil	September 15, 1994
	OSUM 56741	Cahaba River, at Jericho, Perry Co., AL	S.W. McGregor	September 13, 1994
	OSUM 56743	Cahaba River, ca. 1 mi. SE of Jericho Bridge, Perry Co., AL	S.W. McGregor	September 20, 1994
	OSUM 56745	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 56751	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 56755	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil	September 20, 1994
	OSUM 56826	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil	September 20, 1994
	OSUM 56979	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 57658	Oakmulgee Creek, at AL Rt. 14, Dallas Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	OSUM 57980	Oakmulgee Creek, at dirt section of Co. Rt. 30, Perry Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	OSUM 62453	Cahaba River, Perry Co., AL	P. Yokley, J. Selby, S. Jett	August 6, 1997
	OSUM 67771	Cahaba River, Sprott boat ramp, Perry Co., AL	AL Dept. Conservation	August 21-22, 1991
	UMMZ 58456	Cahaba River, at Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 58382	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 76644	Cahaba River, AL		
	UMMZ 76653	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 76877	Cahaba River, Gurnee, Shelby Co., AL	H.E. Wheeler	
	UMMZ 58381	Cahaba River, 0.5 mi N of Felix, Dallas Co., AL		
	UMMZ 58366	Cahaba River, 10 mi NW of Selma, Dallas Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Quadrula asperata</i>	UMMZ 1130140	Cahaba River, near Beloit, Dallas Co., AL		
	UMMZ 130139	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 76877	Cahaba River, at Gurnee, Shelby Co., AL		
	UMMZ 130138	Cahaba River, at Lovick, Jefferson Co., AL		
	UMMZ 130137	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 130136	Cahaba River, at Lily Shoats, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 130141	Cahaba River, old Tuscaloosa Pike crossing, Shelby Co., AL		
	UMMZ 130147	Cahaba River, at Grants Mill, Jefferson Co., AL		
	UMMZ 130146	Cahaba River, Central RR at GA crossing near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 163890	Little Cahaba River, Bibb Co., AL		
	UMMZ 75704	Cahaba River, Lily Shoals, Bibb Co., AL	R. E. Call	
	UMMZ 130149	Cahaba River, at Lovick, Jefferson Co., AL		
	UMMZ 75699	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
	UMMZ 75701	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 75702	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 75695	Cahaba River, AL		
	UMMZ 56787	Cahaba River, 1 mi N of Acton, Jefferson Co., AL		
<i>Quadrula metanevra</i>	FLMNH 68734	Alabama River, Selma, Dallas Co., AL	R.E. Call	
	OSUM 31921	Cahaba River, at island 300 yards above US Rt. 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32432	Cahaba River, Perry Co., AL	P.M. Hartfield, J.D. Williams, J. Stewart	September 10, 1984
	OSUM 56707	Cahaba River, Centreville, Perry Co./Bibb Co., AL	S.W. McGregor, P. Hartfield, P.E. O'Neil	August 31 - September 1, 1994
	OSUM 74635	Cahaba River, Rt 14, Perry Co., AL	H. McCullagh	July 26, 1996
	UMMZ 65772	Cahaba River, W of Sprott, Perry Co., AL		
	UMMZ 65785	Cahaba River, near Beloit, Dallas Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Quadrula metanevra</i>	UMMZ 65743	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 58399	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 65763	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 58368	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 55474	Cahaba River, E of Marion Jct., Dallas Co., AL	H. van der Schalie	June 29, 1932
	UMMZ 77092	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 58417	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58367	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 75785	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
<i>Quadrula rumphiana</i>	ANSP 100726	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	ANSP 48185	Cahaba River, Valley Creek, Toadvine, Jefferson Co., AL	B. Walker	1919
	MFM 13145	Cahaba River, Caldwell Ford, 3.2 km miles S of Cahaba Heights, Shelby Co., AL		January 1, 1966
	OSUM 31965	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972
	OSUM 32022	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32041	Cahaba River, below US Rt. 280, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32055	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32110	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32139	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 39309	Cahaba River, at Co. Rt. 29, Caldwell Ford, Shelby Co., AL	H.D. Athearn	January 1, 1966
	OSUM 56744	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 56978	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	UMMZ 58432	Cahaba River, 2 mi NE of Centerville, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Quadrula rumpfiana</i>	UMMZ 58457	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 76784	Cahaba River, AL		
	UMMZ 76895	Cahaba River, Gurnee, Shelby Co., AL		
	UMMZ 76802	Cahaba River, at Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 130144	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 130143	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 130142	Cahaba River, below dam of Birmingham Water Co., near Mertle, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 76803	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	
	UMMZ 130145	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
<i>Quadrula verrucosa</i>	ANSP 48342	Cahaba River, AL	B. Walker	
	ANSP 100649	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	FLMNH 68065	Cahaba River, AL	R.E. Call	
	FLMNH 68081	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	FLMNH 68122	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 68095	Little Cahaba River, Bibb Co., AL	H.H. Smith	June 1916
	FLMNH 68066	Cahaba River, Pratts Ferry, Bibb Co., AL	R.E. Call	
	FLMNH 68093	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	August 1912
	MFM 22804	Cahaba River, just above the mouth of Patton Creek, 7.5km NNE of Helena, Shelby Co., AL	H.D. Athearn	August 24, 1971
	MFM 5676	Cahaba River, Rt. 9 ESE of Birmingham, Jefferson Co., AL	H.D. Athearn	September 3, 1955
	MFM 2328	Cahaba River, 1½ mile NNW of Piper, Bibb Co., AL	H.D. Athearn	October 11, 1951
	OSUM 27535	Cahaba River, above US Rt. 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 27588	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 31963	Cahaba River, below Co. Rt. 14, Perry Co., AL	C.S. Baldwin, S. Raines, V. Swain	October 14, 1972

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Quadrula verrucosa</i>	OSUM 31996	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32082	Cahaba River, below US Rt. 78, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32090	Cahaba River, below Lovick, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32109	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32138	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32448	Little Cahaba River, at Co. Rt. 65, Bibb Co., AL	K.S. Cummings, C.A. Mayer, S.T. Sobaski	May 18, 1988
	OSUM 38074	Cahaba River, Piper, Bibb Co., AL	H.H. Smith	Aug 1918
	OSUM 56747	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 57657	Oakmulgee Creek, at AL Rt. 14, Dallas Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995
	UMMZ 55476	Cahaba River, E of Marion Jct., Dallas Co., AL		
	UMMZ 56797	Cahaba River, 1 mi N of Acton, Jefferson Co., AL		
	UMMZ 58419	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 58371	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 65639	Cahaba River, at Lovick, Jefferson Co., AL		
	UMMZ 58433	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 58401	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 58384	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 65655	Cahaba River, Central RR of GA crossing, near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65683	Cahaba River, 1 mi above Centerville, Bibb Co., AL		
	UMMZ 65751	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 65794	Cahaba River, on Rd #80 W of Selma, Dallas Co., AL		
	UMMZ 65649	Cahaba River, near Roper, Jefferson Co., AL	H. van der Schalie	September 4, 1935

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Quadrula verrucosa</i>	UMMZ 65661	Cahaba River, at Grants Mill, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65668	Cahaba River, below dam of Birmingham Water Co., near Mertle, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65696	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65759	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 65719	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65708	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65738	Cahaba River, 10 mi N of Centerville, Bibb Co., AL		
	UMMZ 65780	Cahaba River, near Beloit, Dallas Co., AL		
	UMMZ 73267	Cahaba River, AL		
	UMMZ 73308	Cahaba River, Pine Island, Bibb Co., AL		
	UMMZ 73305	Cahaba River, Gurnee, Shelby Co., AL		
	UMMZ 73359	Cahaba River, Wild Cat Island, AL		
	UMMZ 73360	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 163899	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
<i>Strophitus connasaugaensis</i>	FLMNH 270144	Cahaba River, Jefferson Co., AL	R.E. Call	
	FLMNH 65909	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	October 1, 1912
	FLMNH 267589	Cahaba River, AL	H.H. Smith	November 1910
	OSUM 21939	Little Cahaba River, Cahaba Valley Church, Bibb Co., AL	D.H. Stansbery, H.D. Athearn	September 26, 1966
	OSUM 32337	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	UMMZ 74900	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 105674	Cahaba River, AL		
	UMMZ 74891	Buck Creek, Shelby County, AL		
	UMMZ 38239	Cahaba River, AL		
	UMMZ 75624	Cahaba River, Henry Ellen, Jefferson County, AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Strophitus connasugaensis</i>	UMMZ 74902	Buck Creek, Selma, Dallas County, AL		
<i>Strophitus subvexus</i>	FLMNH 68032	Cahaba River, Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	OSUM 27587	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	UMMZ 65845	Cahaba River, below dam at Birmingham Water Co., near Mertle, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65844	Cahaba River, Grants Mill, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65843	Cahaba River, Central RR of GA crossing, near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65842	Cahaba River, Lovick, Jefferson Co., AL		
	UMMZ 58458	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 65847	Cahaba River, at Nunley Ford, W of Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65846	Cahaba River, at Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 163874	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 65644	Cahaba River, at Lovick, Jefferson Co., AL		
	UMMZ 74911	Cahaba River, AL		
<i>Toxolasma corvunculus</i>	MFM 5684	Cahaba River, Rt. 9, 9 miles ESE of Birmingham, Jefferson Co., AL	H.D. Athearn	September 3, 1955
	OSUM 27593	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	UMMZ 99889	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 99087	Cahaba River, Montevallo, Shelby Co., AL		
	UMMZ 99081	Cahaba River, AL		
	UMMZ 99078	Buck Creek, AL		
	UMMZ 65730	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Toxolasma corvunculus</i>	UMMZ 65659	Cahaba River, Central RR of GA crossing near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65645	Cahaba River, Lovick, Jefferson Co., AL		
	UMMZ 58442	Cahaba River, Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 99260	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 99275	Cahaba River, Montevallo, Shelby Co., AL		
	UMMZ 163861	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 163880	Buck Creek, Helena, Shelby Co., AL		
<i>Toxolasma parvus</i>	UMMZ 55342	Willow Creek, Martins Station, Dallas Co., AL		
<i>Toxolasma sp.</i>	OSUM 32044	Little Cahaba River, at Co. Rt. 17, Shelby Co., AL	J.D. Williams	October 14, 1972
	OSUM 56993	Dry Creek, Perry Co., AL	J.C. Hall	June 15, 1993
<i>Truncilla donaciformis</i>	FLMNH 19843	Cahaba River, below Harrisburg, 1st island downstream, 7.5 mi SW of Centreville, Perry Co., AL	M. Pierson, S.Puleo	July 28, 1990
	OSUM 56710	Cahaba River, Centreville, Perry/Bibb Co., AL	S.W. McGregor, P. Hartfield, P.E. O'Neil	August 31- September 1, 1994
	OSUM 56982	Cahaba River, Perry Co., AL	S.W. McGregor, P.E. O'Neil, M.B. Hicks	September 22, 1994
	OSUM 67775	Cahaba River, Sprott boat ramp, Perry Co., AL	AL Dept of Conservation	August 21-22, 1991
	UMMZ 58383	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 65682	Cahaba River, 1 mi above Centerville, Bibb Co., AL		
	UMMZ 65688	Buck Creek at Helenas, Shelby Co., AL		
	UMMZ 58370	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 65798	Cahaba River, on Rd # 80 W of Selma, Dallas Co., AL		
	UMMZ 65787	Cahaba River, near Beloit, Dallas Co., AL		
	UMMZ 65733	Cahaba River, at Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Truncilla donaciformis</i>	UMMZ 65777	Cahaba River, W of Sprott, Perry Co., AL		
<i>Uniomerus declivis</i>	OSUM 56992	Dry Creek, Perry Co., AL	J.C. Hall	June 15, 1993
	OSUM 59050	Childers Creek, at AL Rt 22, Dallas Co., AL	S.W. McGregor	August 2, 1996
<i>Uniomerus tetralasmus</i>	ANSP 48027	Cahaba River, Coffee Creek, AL	B. Walker (Showalter collection)	
	ANSP 118396	Cahaba River, Coffee Creek, AL	L. Brewer Hall	1918
	UMMZ 73155	Montevallo, Shelby Co., AL		
<i>Utterbackia imbecillis</i>	FLMNH 64038	Little Cahaba River, 6 mi S of Leeds, Jefferson Co., AL		September 5, 1935
	FLMNH 64019	Perry Co., AL	E.R. Showalter	
	OSUM 27586	Cahaba River, above I-20/US Rt. 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	UMMZ 65658	Cahaba River, Central RR of GA crossing, N of Henry Ellen, Jefferson Co., AL		
	UMMZ 65643	Cahaba River, Lovick, Jefferson Co., AL		
	UMMZ 65634	Little Cahaba River, below BWC 6 mi below Leeds, Jefferson Co., AL	H. van der Schalie	September 5, 1935
<i>Villosa lienosa</i>	ANSP 100677	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	ANSP 390132	Cahaba River, small tributary to the Cahaba River, AL	R.T. Dillon	
	ANSP 328035	Cahaba River, off Co. Rt. 10, old slab crossing beyond Pea Ridge, 12 miles from Montevallo, Shelby Co., AL	G. Davis	July 15, 1972
	FLMNH 68448	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 12, 1916
	FLMNH 68441	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 68387	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 68329	Dry Creek, Dallas Co., AL	R.L. Howard	August 1915
	FLMNH 68399	Cahaba River, Jefferson Co., AL	H.H. Smith	August 1912
	FLMNH 68364	Cahaba River, near Leeds, Jefferson Co., AL	H.H. Smith	August 1912

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Villosa lienosa</i>	FLMNH 68363	Cahaba River, near Marion, Perry Co., AL	E.R. Showalter	
	FLMNH 47274	Cahaba River, Suttle, Perry Co., AL	H. Lee	November 25, 1967
	FLMNH 26919	Schultz Creek, 4.2 mi N of Centreville, Bibb Co., AL	F.G. Thompson	October 22, 1976
	FLMNH 68503	Little Cahaba River, Bibb Co., AL	H.H. Smith	June 1916
	FLMNH 68475	Cahaba River, Henry Ellen, Jefferson Co., AL		October 1912
	FLMNH 68606	Cahaba River, Lily Shoals, Bibb Co., AL		September 1935
	OSUM 21942	Little Cahaba River, Cahaba Valley Church, Bibb Co., AL	D.H. Stansbery, H.D. Athearn	September 26, 1966
	OSUM 27595	Cahaba River, above I-20/US Rt 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 32153	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 27501	Cahaba River, above US Rt 82/AL Rt 25, Centreville, Bibb Co., AL	J.J. Jenkinson	September 29, 1968
	OSUM 27544	Cahaba River, above US Rt 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 31932	Cahaba River, at island 300 yds above US Rt 80, Dallas Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31958	Cahaba River, 150 yds below, Perry Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 31986	Cahaba River, below US Rt 82, Centerville, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 31994	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32002	Cahaba River, at Pratts Ferry (Co. Rt. 27), Bibb Co., AL	J.D. Williams, C.S. Baldwin, V. Pearson, J.C. Hall	September 16, 1972
	OSUM 32019	Little Cahaba River, at Co. Rt. 65, Bulldog Bend, Bibb Co., AL	C.S. Baldwin	November 5, 1972
	OSUM 32035	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32045	Little Cahaba River, at Co. Rt. 17, Shelby Co., AL	J.D. Williams	October 14, 1972
	OSUM 32086	Cahaba River, below US Rt. 78, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32121	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32332	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32345	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 56758	Cahaba River, Perry Co., AL	S.W. McGregor, P. E. O'Neil	September 20, 1994

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Villosa lienosa</i>	OSUM 56966	Cahaba River, from US Rt 80 upstream to Co. Rt., Dallas Co., AL	W. Ebert	June 18, 1993
	OSUM 56995	Rice Creek, Perry Co., AL	J.C. Hall	July 10, 1993
	OSUM 57659	Oakmulgee Creek, at AL Rt 14, Dallas Co., AL	S.W. McGregor, T.E. Sheperd	September 18, 1995
	OSUM 57981	Oakmulgee Creek, at dirt section of Co. Rt. 30, Perry Co., AL	S.W. McGregor, T.E. Sheperd	September 18, 1995
	UMMZ 84144	Cahaba River, Blocton, Bibb Co., AL		
	UMMZ 58198	Creek, 5 mi NE of Selma, Dallas Co., AL		
	UMMZ 65674	Cahaba River, below dam of Birmingham Water Co. near Mertle, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65641	Cahaba River, at Lovick, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 84122	Cahaba River, at Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 65666	Cahaba River, at Grant's Mill, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65657	Cahaba River, Central RR of GA crossing near Henry Ellen, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 85431	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 86192	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 65704	Cahaba River, Nunley Ford W of Helena, Shelby Co., AL		
	UMMZ 65716	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65756	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 58412	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 84033	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
	UMMZ 163863	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 84035	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 65721	Cahaba River, at Lily Shoals about 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 58454	Cahaba River, at Lily Shoals, 6 mi E of Blocton, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Villosa lienosa</i>	UMMZ 65797	Cahaba River, Rd # 80, W of Selma, Dallas Co., AL		
	UMMZ 58360	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 55396	Cahaba River, E of Marion Jct., Dallas Co., AL	H. van der Schalie	June 29, 1932
	UMMZ 65721	Cahaba River, at Lily Shoals about 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 58377	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 58378	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 65769	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 87313	Cahaba River, AL		
	UMMZ 84030	Shoal Creek at Montevallo, Shelby Co., AL		
	UMMZ 89205	Shoal Creek at Montevallo, Shelby Co., AL		
	UMMZ 84141	Montevallo, Shelby Co., AL		
	UMMZ 65637	Little Cahaba River, overflow of Birmingham Water Co., 6 mi below Leeds, Jefferson Co., AL		
	UMMZ 65625	Little Cahaba River, 1 mi S of Leeds, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 65626	Little Cahaba River, 2 mi above Leeds, Jefferson Co., AL		
	UMMZ 65631	Little Cahaba River, 4 mi S of Leeds, Jefferson Co., AL	H. van der Schalie	September 4, 1935
<i>Villosa nebulosa</i>	FLMNH 68525	Cahaba River, AL	E.R. Showalter	
	FLMNH 68500	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 68516	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 68505	Cahaba River, near Leeds, Jefferson Co., AL	H.H. Smith	August 1912
	OSUM 32034	Cahaba River, at Co. Rt. 29, Shelby Co., AL	J.D. Williams	October 13, 1972
	OSUM 32050	Little Cahaba River, Leeds, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32061	Cahaba River, at Co. Rt. 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 32120	Cahaba River, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32152	Cahaba River, at Co. Rt. 52, Shelby Co., AL	J.D. Williams, C.S. Baldwin	February 25, 1973
	OSUM 32293	Six Mile Creek, at Co. Rt. 25, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Villosa nebulosa</i>	OSUM 32331	Little Cahaba River, its mouth, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	OSUM 32344	Little Cahaba River, Bibb Co., AL	J.D. Williams, C.S. Baldwin	February 28, 1973
	UMMZ 65632	Little Cahaba River, 4 mi S of Leeds, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 85281	Cahaba River, at Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 85365	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 85327	Cahaba River, AL		
<i>Villosa vibex</i>	ANSP 341272	Cahaba River, Bell Creek, Millers Ferry, AL	ex. Marvin Hyett	
	ANSP 100688	Cahaba River, Gurnee, AL	H.H. Smith	
	ANSP 42129	Cahaba River, Girard Creek, AL	E.R. Showalter	
	ANSP 47920	Cahaba River, Valley Creek, Toadvine, Jefferson Co., AL	E.R. Showalter	
	ANSP 126299	Cahaba River, Girard Creek, AL		
	FLMNH 68966	Cahaba River, AL		
	FLMNH 68935	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 68945	Cahaba River, Pratts Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 68992	Cahaba River, near Piper, Bibb Co., AL		June 12, 1916
	FLMNH 68940	Little Cahaba River, Bibb Co., AL		June 1916
	FLMNH 68948	Cahaba River, near Henry Ellen, Jefferson Co., AL		August 1912
	FLMNH 197836	Cahaba River, 3.2 mi SE of Irondale, CR 143, Jefferson Co., AL	M. Pierson	July 27, 1990
<i>Villosa vibex</i>	FLMNH 68959	Cahaba River, Lake Purdy, 12 mi E of Birmingham, AL	H.H. Smith	March 1915
	FLMNH 68931	Cahaba River, Helena, Shelby Co., AL	H.H. Smith	July 1, 1913
	OSUM 27596	Cahaba River, above I-20/US Rt 78, Jefferson Co., AL	J.J. Jenkinson	September 15, 1968
	OSUM 32049	Little Cahaba River, Leeds, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 38083	Shoal Creek, Montevallo, Shelby Co., AL	Aldrich	18--
	OSUM 43426	Cahaba River, AL	collector unknown	prior to May 1915
	OSUM 57663	Oakmulgee Creek, at AL Rt 219, Perry/Dallas Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Villosa vibex</i>	UMMZ 65665	Cahaba River, Grants Mill, Jefferson Co., AL	H. van der Schalie	September 5, 1935
	UMMZ 65717	Cahaba River, old Tuscaloosa Pike crossing, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 65700	Cahaba River, Nunley Ford W of Helena, Shelby Co., AL	H. van der Schalie	September 7, 1935
	UMMZ 163862	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	UMMZ 65722	Cahaba River, at Lily Shoals about 6 mi E of Blocton, Bibb Co., AL		
	UMMZ 89051	Cahaba River, at Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 58426	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 89067	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	
	UMMZ 89046	Cahaba River, Pine Island, Bibb Co., AL	H.E. Wheeler	
	UMMZ 65652	Cahaba River, Central RR of GA crossing near Henry Ellen, Jefferson Co., AL		
	UMMZ 65640	Cahaba River, at Lovick, Jefferson Co., AL	H. van der Schalie	September 4, 1935
	UMMZ 91152	Cahaba River, AL		
	UMMZ 89106	Cahaba River, AL	R.E. Call	
	UMMZ 89050	Cahaba River, at Wild Cat Island near Cane Creek, AL	H.E. Wheeler	
<i>Villosa sp.</i>	OSUM 20837	Cahaba River, AL	T.H. Aldrich	18--
	OSUM 27545	Cahaba River, above US Rt 31, Jefferson Co., AL	J.J. Jenkinson	October 13, 1968
	OSUM 32067	Cahaba River, at Co. Rt 143, Jefferson Co., AL	J.D. Williams	October 14, 1972
	OSUM 38037	Cahaba River, AL	Aldrich	18--
	OSUM 38084	Shoal Creek, Montevallo, Shelby Co., AL	Aldrich?	18--
	OSUM 38086	Shoal Creek, Montevallo, Shelby Co., AL	collector unknown	18--
	OSUM 57664	Oakmulgee Creek, at AL Rt 219, Perry/Dallas Co., AL	S.W. McGregor, T.E. Shepard	September 18, 1995

Appendix ?. Database of historical freshwater gastropod collections taken from the Cahaba River Basin. Historical distribution records have been assembled from the National Academy of Sciences (ANSP) in Philadelphia, PA; Florida State Museum of Natural History (FLMNH) in Gainesville, FL; Museum of Fluvial Mollusks (MFM) in Cleveland, TN; North Carolina Museum of Natural History (NCMNH), Raleigh, NC; The Ohio State University Museum (OSUM) in Columbus, OH; the University of Michigan Natural History Museum (UMMZ) in Ann Arbor, MI; and the Smithsonian Institution (USNM) in Washington, D.C..

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<b>Viviparidae</b>				
<i>Campeloma regulare</i>	FLMNH 89409	Cahaba River, near Piper, Bibb Co., AL	Leg: UA	July 1917
	FLMNH 89422	Cahaba River, AL	UA, T.H. Aldrich	
	FLMNH 89426	Cahaba River, AL	UA	
	FLMNH 89431	Town Creek, Montevallo, Shelby Co., AL	UA, T.H. Aldrich, Ex: H.H. Smith	
	FLMNH 89406	Cahaba River, Anita, Bibb Co., AL	Leg: UA	
	FLMNH 89393	Buck Creek, Helena, Shelby Co., AL	Leg: UA	
	OSUM 7209	Buck Creek, below mill dam in Helena, 14 mi N of Montevallo, Shelby Co., AL	R. Grace	June 3, 1976
	OSUM 5473	Cahaba River, on Shelby Co., Rt 52, approx. 2 mi E of Helena, Shelby Co., AL	J.D. Williams, A. Williams	February 25, 1973
	OSUM 14903	Kelly Creek, below bridge, 4.4 mi NNE of Vincent, AL	D.F. Stansberry, H.D. Athearn	September 26, 1966
	OSUM 796	Cahaba River, at Co. Rt 52 bridge, 2.7 mi WSW of Helena, 5.6 mi NW of Alabaster, AL	C.B. Stein	July 31, 1977
	OSUM 7208	Cahaba River, at mouth of Hancock Creek, 9.9 mi SW of Helena, 9.9 mi NW of Montevallo, AL	R. Grace	June 3, 1976
	UMMZ 95759	Cahaba River, 3 mi above Lily Shoals, Bibb Co., AL		
	UMMZ 95763	Town Creek, Montevallo, Shelby Co., AL	H.H. Smith	
	UMMZ 95772	Alabama River, Selma, Dallas Co., AL	Lewis collection	
<i>Lioplax cyclostomaformis</i>	ANSP 104892	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	ANSP 28129	Cahaba River, AL	B. Walker	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lioplax cyclostomaformis</i>	ANSP 136623	Cahaba River, Buck Creek, Helena, Shelby Co., AL	H.H. Smith	
	ANSP 326502	Cahaba River, County Road 10 Bridge, Shelby Co., AL	G.W. Davis	1904 July 15, 1972
	FLMNH 89091	Cahaba River, Lily Shoals, Bibb Co., AL	Leg: UA, T.H. Aldrich coll., Ex: Call	
	FLMNH 89104	Cahaba River, AL	R.E. Call, Leg: UA	
	FLMNH 89106	Cahaba River, AL	T.H. Aldrich coll.	
	FLMNH 89103	Cahaba River, AL	T.H. Aldrich, Leg:UA	1878
	FLMNH 89100	Cahaba River, near Piper, Bibb Co., AL	Leg:UA, H.H. Smith	June 12, 1916
	FLMNH 89107	Cahaba River, AL	T.H. Aldrich, Leg:UA	
	FLMNH 89114	Cahaba River, AL	Leg: UA, Mohr coll.	
	FLMNH 89109	Cahaba River, AL	Leg: UA	
	FLMNH 89125	Cahaba River, Lily Shoals, Shelby Co., AL	T.H. Aldrich coll., Leg:UA	
	FLMNH 89112	Cahaba River, prob. Lily Shoals, Bibb Co., AL	Leg: UA	
	FLMNH 89118	Cahaba River, Lily Shoals, Bibb Co., AL	Leg: UA	
	FLMNH 89160	Cahaba River, Lily Shoals, Bibb Co., AL	Leg: UA, Ex: R.E. Call	
	FLMNH 89111	Cahaba River, Wildcat Island, AL	Leg: UA	November 16, 1909
	FLMNH 89108	Little Cahaba Creek, Jefferson Co., AL	H.H. Smith, Leg: UA	June 1916
	FLMNH 89092	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call, Leg: UA	
	FLMNH 89101	Cahaba River, Lily Shoals, Bibb Co., AL	Leg: UA	
	FLMNH 89095	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith, Leg: UA	July 1917
	OSUM 1737	Cahaba River, AL	Aldrich	
	UMMZ 67111	Cahaba River, near Rurnee, Shelby Co., AL		
	UMMZ 69470	Buck Creek, Shelby Co., AL		
	UMMZ 95116	Cahaba River, AL	R.E. Call	
	UMMZ 65977	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lioplax cyclostomaformis</i>	UMMZ 65976	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 49279	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 95119	Cahaba River, Wild Cat Island, AL	H.E. Wheeler	
	UMMZ 95130	Buck Creek, Shelby Co., AL	P.L. Marsh collect	
	UMMZ 185894	Cahaba River, AL	Aldrich	1882
<i>Tulatoma magnifica</i>	UMMZ 58573	Floodplain of Alabama River, Claiborne, Clarke, Monroe Co., AL		
<b>Hydrobiidae</b>				
<i>Birgella subglobosa</i>	FLMNH 88702	Alabama River, Selma, Dallas Co., AL		
	UMMZ 68304	Alabama River, AL		
	UMMZ 117189	Alabama River, Selma, Dallas Co., AL	L. Call	
<i>Lepyrium showalteri</i>	ANSP 105014	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	ANSP 105013	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	ANSP 119521	Cahaba River near Piper, Bibb Co., AL	H.H. Smith	June, 1916
	ANSP 119522	Little Cahaba River, 3 mile E of Piper, Bibb Co., AL	H.H. Smith	June, 1916
	ANSP 76911	Cahaba River, AL	B. Walker	
	ANSP 408240	Cahaba River, AL		
	FLMNH 231756	Cahaba River, 2.6 mi E of Hunnicut or Hebron?, Shelby Co., AL	R. Hanley	November 20, 1981
	FLMNH 227604	Cahaba River, Wildcat Island, AL		November 16, 1909
	FLMNH 28081	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	FLMNH 78572	Cahaba River, Lily Shoals, Bibb Co., AL		
	FLMNH 40353	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	
	UMMZ 97448	Little Cahaba River, 3 mi E of Piper, Bibb Co., AL	H.H. Smith	June 1916

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Lepyrium showalteri</i>	UMMZ 97448	Little Cahaba River, Bibb Co., AL	H.H. Smith	
	UMMZ 67445	Cahaba River, Gurnee, Shelby Co., AL	H.H. Smith	
	UMMZ 65996	Cahaba River, Piper, Bibb Co., AL	H.H. Smith	
	UMMZ 49272	Cahaba River, Lily Shoals, Bibb Co., AL	H.H. Smith	
	UMMZ 67444	Little Cahaba River, 3 mi E of Piper, Bibb Co., AL		
	UMMZ 97446	Cahaba River, Wild Cat Island, near Cane Creek, AL	H.E. Wheeler	
	UMMZ 68301	Cahaba River, near Anita, Shelby Co., AL	H.H. Smith	
<i>Somatogyrus sp.</i>	ANSP 322880	Cahaba River, 1 mile N of Centerville, Bibb Co., AL	L. Hubriet	Oct. 30, 1965
	ANSP 122150	Cahaba River, AL		
<i>Somatogyrus aldrichi</i>	UMMZ 22409	Cahaba River, AL		
	UMMZ 116891	Alabama River, Selma, Dallas Co., AL		
<i>Somatogyrus coosaensis</i>	UMMZ 116946	Cahaba River, AL		
<i>Somatogyrus decipiens</i>	UMMZ 116923	Montevallo, Shelby Co., AL		
	UMMZ 162437	Alabama River, Selma, Dallas Co., AL	L. Hubricht	1939
<i>Somatogyrus excavatus</i>	UMMZ 69941	Cahaba River, near Gurnee, Shelby Co., AL	H.H. Smith	
<i>Somatogyrus hinkleyi</i>	UMMZ 66443	Little Cahaba River, 3 mi E of Piper, Bibb Co., AL		
	UMMZ 116955	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 116956	Cahaba River, Wild Cat Island, Bibb Co., AL	H.E. Wheeler	
<i>Somatogyrus nanus</i>	UMMZ 65989	Cahaba River, below 1st, Sam Grant's Mill, Jefferson Co., AL		
	UMMZ 65990	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Somatogyrus nanus</i>	UMMZ 65991	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL		
	UMMZ 65997	Cahaba River, Piper, Bibb Co., AL	H.H. Smith	
	UMMZ 67442	Little Cahaba River, 3 mi S of Piper, Bibb Co., AL		
	UMMZ 69994	Cahaba River, near Gurnee, Shelby Co., AL		
	UMMZ 69945	Cahaba River, near Piper, Bibb Co., AL		
	UMMZ 117147	Cahaba River, near Cane Creek, Wild Cat Island, AL	H.E. Wheeler	
<i>Somatogyrus obtusus</i>	UMMZ 161565	Cahaba River, AL		
<i>Somatogyrus pumilus</i>	UMMZ 65992	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 117168	Cahaba River, McGuire Shoals, Bibb Co., AL	H.E. Wheeler	
<b>Pleuroceridae</b>				
<i>Elimia ampla</i>	ANSP 177114	Cahaba River, AL	C. Goodrich	
	ANSP 44957	Cahaba River, AL	B. Walker	
	ANSP 363868	Cahaba River, AL	H.H. Smith	
	FLMNH 71374	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call, Leg: UA, Ex: T.H. Aldrich	
	FLMNH 230332	Little Cahaba River, 1.5 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
	FLMNH 238039	Cahaba River, Wildcat Island, AL	Leg: Beal-Mattheie coll	November 16, 1909
	FLMNH 230329	Six Mile Creek, 0.3 mi above Little Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
	FLMNH 71351	Cahaba River, near Piper, Bibb Co., AL	Leg: UA	
	FLMNH 71357	Montevallo, Bibb Co., AL	Leg: UA	
	FLMNH 71373	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith, Leg: UA	August 1918
	FLMNH 71372	Little Cahaba River, Bibb Co., AL	Leg: UA	
	FLMNH 71367	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith, Leg: UA	August 1918

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia ampla</i>	FLMNH 71376 UMMZ 55745 UMMZ 59265 UMMZ 56809 UMMZ 37088 UMMZ 49277	Little Cahaba River, Bibb Co., AL Cahaba River, Lily Shoals, Bibb Co., AL Cahaba River, near Piper, Bibb Co., AL Cahaba River, Piper, Bibb Co., AL Cahaba River, AL Cahaba River, AL	Leg: UA	June 12, 1916
<i>Elimia annettae</i>	ANSP 169560 ANSP 177119 ANSP 124978 FLMNH 71390 FLMNH 47275 UMMZ 128911 UMMZ 128908 UMMZ 133700 UMMZ 128915	Cahaba River, pools above bridge near Blocton, Bibb Co., AL Cahaba River, Lilly Shoals, Bibb Co., AL Cahaba River, AL Cahaba River, Lily Shoals, Bibb Co., AL Cahaba River, Suttle, Perry Co., AL Cahaba River, Lily Shoals, below bridge, Blocton, Bibb Co., AL Cahaba River, Lily Shoals, pools, below bridge, Blocton, Bibb Co., AL Cahaba River, Wild Cat Island, Lily Shoals, Bibb Co., AL Cahaba River, Pratt's Ferry, Bibb Co., AL	C. Goodrich  C. Goodrich  Leg: UA H. Lee	1935 November 25, 1967
<i>Elimia bellacrenata</i>	ANSP 122551 ANSP 363880 ANSP 363879 FLMNH 71490 FLMNH 71485 FLMNH 71483 FLMNH 71480	Cahaba River, Shelby Co., AL Cahaba River, spring at Montevallo, Shelby Co., AL Cahaba River, AL Spring at Montevallo, Shelby Co., AL Spring Creek, Ebenezer Church, 6 mi NE of Montevallo, Shelby Co., AL Jefferson Co., AL Limestone Spring by Spring Creek, Montevallo, Shelby Co., AL	Leg: UA Leg: UA, H.H. Smith, T.H. Aldrich coll. Leg: UA, T.H. Aldrich coll. H.H. Smith, Leg: UA	July 2, 1913

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia bellacrenata</i>	FLMNH 71479	Spring on Coffee Creek, Bibb Co., AL	Leg: UA, T.H. Aldrich coll.	
	FLMNH 71484	Spring, Ebenezer Church, 8 mi NE of Montevallo, Shelby Co., AL	Leg: UA, T.H. Aldrich coll.	
	OSUM 18183	Little Cahaba River, Co. Rt. 10 bridge, 3.6 mi NW of Ashby, 5.3 mi ESE of Coleanor, Bibb Co., AL	G.T. Watters, W. Kasson	July 29, 1986
	UMMZ 36513	Shelby Co., AL		
	UMMZ 45267	Big Spring, 4 mi N of Blocton, AL		
	UMMZ 5664	Spring Creek, Ebenezer Church, 6 mi NE of Montevallo, Shelby Co., AL		
	UMMZ 40507	Spring at Woodstock, AL		
	UMMZ 56836	Walker's Spring near Birmingham, Jefferson Co., AL		
	UMMZ 55753	Paris Creek, near Montevallo, Shelby Co., AL		
	UMMZ 37763	Limestone Spring of Town Creek, Montevallo, Shelby Co., AL		
	UMMZ 37765	Buck Creek, Shelby Co., AL		
	UMMZ 55721	Miller Springs, Bibb Co., AL		
	UMMZ 66276	Clear Creek, Shelby Co., AL		
	UMMZ 65088	Birmingham, Jefferson Co., AL		
	UMMZ 58583	Spring at head of Spring Creek, 7 mi NE of Montevallo, Shelby Co., AL		
	UMMZ 65999	Spring of Town Creek, Montevallo, Shelby Co., AL		
	UMMZ 243204	Alabama River, Choctaw Bluff, Clarke Co., AL	L. Hubricht	December 11, 1965
	UMMZ 243205	Spring, Salt Creek, 2.5 mi NW of Rockville, Clarke Co., AL	L. Hubricht	May 8, 1965
<i>Elimia cahawbensis</i>	ANSP 177063	Cahaba River, Davis Creek, Bibb Co., AL	C. Goodrich	
	ANSP 177062	Cahaba River, Buck Creek, Shelby Co., AL	C. Goodrich	
	ANSP 169562	Cahaba River, Six Mile Creek, Six Mile, AL	H.H. Smith	
	ANSP 169564	Cahaba River, Fawn Creek, Montevallo, Shelby Co., AL	H.H. Smith	
	ANSP 125045	Cahaba River, AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia cahawbensis</i>	ANSP 169563	Little Cahaba River, 2 miles N of Leeds, Jefferson Co., AL		
	ANSP 177064	Cahaba River, Shelby Co., AL		
	ANSP 175650	Cahaba River, Bishop Creek S of Acton, Jefferson Co., AL		
	FLMNH 238067	Davis Creek, Shelby Co., AL	Leg: Beal-Maltbie	
	FLMNH 72662	Cahaba River, probably Lily Shoals, AL	Leg:UA, Ex: Aldrich	
	FLMNH 72756	Buck Creek, Helena, AL	R.E. Call, Leg: UA	
	FLMNH 72660	Spring Branch, Piper, Centerville Rd., AL	H.H. Smith	August 1918
	FLMNH 72558	Big Springs, 4 mi N of Blocton, AL	Leg: UA	
	FLMNH 72762	Little Cahaba River, AL	Leg: UA	June 11, 1916
	FLMNH 72563	Cahaba River, Lily Shoals, AL	R.E. Call, Leg: UA	
	FLMNH 72579	Big May Berry Creek, AL	Mohr coll, Leg: UA	
	FLMNH 72530	Dailey's Spring, AL	R.E. Call, Leg: UA	
	FLMNH 72565	Mill Creek, AL	Aldrich coll, Leg:UA	
	FLMNH 72744	Sinks district, Spring branch, NE corner, Bibb Co., AL	M.Johnson, Leg:UA	
	FLMNH 72742	Unnamed branch, 3.5 mi N of Six Mile, Bibb Co., AL	Leg: UA	
	FLMNH 72738	Cahaba River, near Piper, Bibb Co., AL	Leg: UA	
	FLMNH 72743	Spring Branch, Cottingham Place, AL	M. Johnson	
	FLMNH 72733	Big Spring, Blocton, AL	Leg: UA	
	FLMNH 72641	Cahaba River, McGuire Shoals, AL	Leg: UA	
	FLMNH 72659	Little Cahaba Creek, AL	Leg: UA, Mohr coll., Ex: Aldrich coll.	
	FLMNH 72542	Little Cahaba Creek, 3 mi E of Piper, AL	H.H. Smith, Leg:UA	June 10, 1916
	FLMNH 72548	Centreville, Bibb Co., AL	T.H. Aldrich coll, Leg: UA	
	FLMNH 72757	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	August 1918
	FLMNH 72649	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith	June 1912
	FLMNH 232038	Little Cahaba River, 4.5 mi NE of Six Mile, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 72618	Rock Creek, Bibb Co., AL	Aldrich coll, Leg:UA	
	FLMNH 72640	Montevallo, Bibb Co., AL	Aldrich coll, Leg:UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia cahawbensis</i>	FLMNH 72655	Cahaba River, near Anita, Bibb Co., AL	H.H. Smith	October 1906
	FLMNH 72674	Daley's Creek, Bibb Co., AL	Leg: UA, Ex: Lewis	
	FLMNH 232032	Creek 3 mi W of West Blocton, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 232033	Little Cahaba River, 3.4 mi NNW Six Mile, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 72666	Cahaba River, 6 mi E of Blockton, Bibb Co., AL	Leg: UA	
	FLMNH 72624	Mineral Spring, 5 mi from Centreville, Bibb Co., AL	Aldrich coll, Leg:UA	
	FLMNH 72753	Little Cahaba River, SE of Piper, Bibb Co., AL	Leg: UA	
	FLMNH 72673	Cahaba River, Piper, Bibb Co., AL	H.H. Smith	June 1916
	FLMNH 72628	Creek joining Cahaba River on E side, 1 mi below Pratt's Ferry, Bibb Co., AL	H.H. Smith	June 8, 1912
	FLMNH 232037	Hill Creek, 4.1 mi W of West Blocton, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 232036	Shultz Creek, 4.2 mi N of Centreville, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 35963	Six Mile Creek, Six Mile, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 72538	Town Creek, Montevallo, Bibb Co., AL	Leg: UA, Ex: W.G. Mazyck	
	FLMNH 232035	Creek, 1 mi E of West Blocton, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 232034	Schultz Creek, 5.3 mi N of Centreville, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 72604	Mineral Spring, 5 mi from Centreville, Bibb Co., AL	Aldrich coll, Leg:UA	
	FLMNH 72587	Cane Creek, Bibb Co., AL	Aldrich coll, Leg:UA	
	FLMNH 230314	Little Cahaba River, 5 mi above Cahaba River, Bibb Co., AL	Thompson, G.Ultsch	June 21, 1978
	FLMNH 230325	Little Cahaba River, 2 mi above Cahaba River, Bibb Co., AL	Thompson, G.Ultsch	June 21, 1978
	FLMNH 230322	Little Cahaba River, 3 mi above Cahaba River, Bibb Co., AL	F.G. Thompson, G.Ultsch	June 21, 1978
	FLMNH 230340	Little Cahaba River, 4 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
	FLMNH 230333	Little Cahaba River, 1.5 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
	FLMNH 72769	Montevallo, Shelby Co., AL	Aldrich coll., Leg: UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia cahawbensis</i>	FLMNH 238074	Cahaba River, Spring Branch trib., Blair Camp, Shelby Co., AL	Leg: Beal- Maltbie coll	
	FLMNH 72774	Davis Creek, near Aldrich mine, Montevallo, Shelby Co., AL	R.E. Call, Leg: UA, Ex: Aldrich	
	FLMNH 72779	Trib of Cahaba River, Bibb Co., AL	Showalter coll., Leg: UA	
	FLMNH 72570	Davis Creek near Aldrich mine, Montevallo, Shelby Co., AL	Aldrich coll, Leg:UA	
	FLMNH 72665	Cahaba River, at mouth of Buck Creek, near Helena, Shelby Co., AL	H.H. Smith, Leg: UA	July 1, 1913
	FLMNH 72555	10 mi N of Montevallo, Shelby Co., AL	Aldrich coll, Leg:UA	
	FLMNH 72593	Big May berry Creek, Shelby Co., AL	Leg: UA	
	FLMNH 72611	Shoal Creek, Montevallo, Shelby Co., AL	R.E. Call, Aldrich coll., Leg: UA	
	FLMNH 72644	Davis Falls, Shelby Co., AL	Aldrich coll, Leg:UA	
	FLMNH 230183	Cahaba River, Bulldog Bend, Shelby Co., AL	G. Ultsch	August 1, 1978
	FLMNH 72680	Little Mayberry Creek, Montevallo, Shelby Co., AL	Aldrich coll, Leg:UA	
	FLMNH 36090	Bolton Spring, 5.8 air mi NNE of Montevallo, Shelby Co., AL	T.R. Jones	March 1, 1979
	FLMNH 72613	Cahaba Creek, near Leeds, Jefferson Co., AL	H.H. Smith	August 1, 1912
	FLMNH 72653	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	August 25, 1912
	FLMNH 232045	Cahaba River, Trussville, Jefferson Co., AL	Thompson	November 19, 1975
	FLMNH 72575	Little Cahaba River, 2 mi N of Leeds, Jefferson Co., AL	Leg: UA	
	FLMNH 72532	Cahaba Creek, 9 mi Quadrieeneta, Jefferson Co., AL	Leg: UA	
	FLMNH 72594	Little Cahaba River, 2 mi E of Raper, Jefferson Co., AL	H.H. Smith	
	FLMNH 232048	Small creek, Cahaba River drainage, Bucksville, Tuscaloosa Co., AL	F.G. Thompson	October 23, 1975
	FLMNH 72663	East Cahaba River, St. Clair Co., AL	Leg: UA	
	FLMNH 72732	Black Creek, Acmar, St. Clair Co., AL	Leg: UA	August 20, 1912
	OSUM 15894	Little Shultz Creek, at Little Shultz Church, 5.5 mi S of W Blocton, Bibb Co., AL	T.D. Richardson	August 13, 1984

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia cahawbensis</i>	UMMZ 137912	Mill Creek, E of Waxahatchee Creek, Shelby Co., AL	H.H. Smith	
	UMMZ 149248	Soapstone Creek, 9.5 mi E of Selma, Dallas Co., AL		March 1941
	UMMZ 133707	Clear Creek, Shelby Co., AL	T.H. Aldrich	
	UMMZ 128932	Cahaba River, near Anita, Shelby Co., AL	H.H. Smith	
	UMMZ 128917	Little Cahaba River, SE of Piper, Bibb Co., AL		
	UMMZ 66789	Spring Branch, sink Dist. Near Six Mile Creek, Bibb Co., AL	W. Jones	
	UMMZ 128916	Six Mile Creek, Six Mile, Bibb Co., AL		
	UMMZ 128918	Tributary of the Little Cahaba River, W of Montevallo, Shelby Co., AL		
	UMMZ 128922	Little Cahaba River, SE of Piper, Bibb Co., AL	H. van der Schalie	1935
	UMMZ 128933	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 128923	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL		
	UMMZ 128930	Cahaba River, W of Henry Ellen, Jefferson Co., AL	H. van der Schalie	1935
	UMMZ 133705	Pratt Creek, near Blocton, Bibb Co., AL	H.E. Wheeler	
	UMMZ 128934	Cahaba River, 12 mi W of Selma, Dallas Co., AL		
	UMMZ 132471	Gary Springs, NE of Centerville, Bibb Co., AL	P. Marsh	
	UMMZ 66732	Cahaba River, Grants Mill, below 2nd shoal, Jefferson Co., AL		
	UMMZ 66733	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 66734	Peavine Creek, Pelham, Shelby Co., AL		
	UMMZ 66735	Buck Creek, Helena, Shelby Co., AL		
	UMMZ 66736	Beaverdale Creek, 5 mi S of Helena, Shelby Co., AL		
	UMMZ 66724	Little Cahaba River, 1 mi below Leeds, Jefferson Co., AL		
	UMMZ 66727	Cahaba River, near Roper, Jefferson Co., AL		
	UMMZ 66728	Cahaba River, RR crossing W of Henry Ellen, Jefferson Co., AL		
	UMMZ 60200	Cahaba River, Pratt's Ferry, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia cahawbensis</i>	UMMZ 60201	Davis Creek, near Montevallo, Bibb Co., AL		
	UMMZ 60720	Spring Creek, Montevallo, Shelby Co., AL		
	UMMZ 62629	Blact Creek, Acmar, St. Clair Co., AL		
	UMMZ 63220	Woodstock, Bibb Co., AL		
	UMMZ 66722	Cahaba River, 1/4 mi above Trussville, Jefferson Co., AL		
	UMMZ 57874	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 57888	Lightseys Mill Creek, 3 mi S of Centerville, Bibb Co., AL		
	UMMZ 58785	Small tributary of Cahaba River, 1 mi below Pratt's Ferry, Bibb Co., AL		
	UMMZ 55716	Schultz Creek, Bibb Co., AL		
	UMMZ 55718	Miller Springs, Bibb Co., AL		
	UMMZ 54211	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	1918
	UMMZ 54205	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	October 1912
	UMMZ 49216	Cahaba River, 1 mi N of Acton, AL		
	UMMZ 37772	Limestone Spring of Town Creek, Montevallo, Shelby Co., AL		
	UMMZ 24156	Creek from Gary Springs, Bibb Co., AL	P. Marsh	January 29, 1938
	UMMZ 36396	Cahaba River, near Centerville, Bibb Co., AL		
	UMMZ 36391	Shoal Creek, near Montevallo, Shelby Co., AL		
<i>Elimia carinifera</i>	ANSP 88492	Cahaba River, spring at Montevallo, Shelby Co., AL	A.A. Hinkley	
	ANSP 27521	Cahaba River, spring at Montevallo, Shelby Co., AL	H. Moores	1981
	ANSP 151504	Cahaba River, Stream 1/2 mile S of Calcara, Shelby Co., AL		
	FLMNH 73344	Buck Creek, AL	Leg: UA	
	FLMNH 72937	Cahaba River, AL	Leg: UA	
	FLMNH 73218	Ebenezer's Spring, AL	Leg: UA	
	FLMNH 73335?	Prob. From Buck Creek, perhaps Montevallo, AL	Leg: UA	
	FLMNH 230344	Cahaba River, 4 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	June 22, 1978

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia carinifera</i>	FLMNH 73323	Bibb Co., AL	Leg: UA, Aldrich coll., Ex: Lewis	
	FLMNH 73280	Bibb Co., AL	Leg: UA, Calkins collection	
	FLMNH 73119	Buck Creek, Helena, Shelby Co., AL	H.H. Smith, Ex: T.H. Aldrich, Leg: UA	June 2004
	FLMNH 73077?	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith, Leg: UA	August 25, 1912
	FLMNH 73247	Cahaba Creek near Leeds, Jefferson Co., AL	Aldrich coll., Leg: UA	
	FLMNH 72994	Little Cahaba River, 4 mi below Leeds, Jefferson Co., AL	Leg: UA	
	FLMNH 72996	Branch of Little Cahaba River, Camp Blair, Jefferson Co., AL	Leg: UA	
	FLMNH 72912	Beaver Creek, near junction with Cahaba River, Henry Ellen, Jefferson Co., AL	Leg: UA, H.H. Smith	
	FLMNH 72917	Little Cahaba River, Leeds, Jefferson Co., AL	Leg: UA, H.H. Smith	
	FLMNH 72921	Spring by Little Cahaba River, near Leeds, Jefferson Co., AL	Leg: UA, H.H. Smith	
	FLMNH 73247	Cahaba Creek near Leeds, Jefferson Co., AL	Aldrich coll., Leg: UA	
	FLMNH 229988	Indian Springs, Shelby Co., AL	Leg: Beal-Maltbie coll.	
	FLMNH 229987	Indian Springs, Shelby Co., AL	Leg: Beal-Maltbie coll.	
	FLMNH 73235	Spring Creek, Ebenezer Church, 6 mi NE of Montevallo, Shelby Co., AL	H.H. Smith	
	FLMNH 73254	Davis Creek, Montevallo, Shelby Co., AL	Leg: UA	
	FLMNH 72914	Cahaba River @ mouth of Buck Creek, near Helena, Shelby Co., AL	Leg: UA	
	FLMNH 73252?	Morgan Creek, 5 mi N of Wilsonville, Shelby Co., AL	H.H. Smith, Leg: UA	
	FLMNH 72925	Four Mile Creek near Wilsonville, Shelby Co., AL	Leg: UA, T.H. Aldrich coll.	
	FLMNH 73060	Ebenezer Creek, Shelby Co., AL	Leg: UA	
	UMMZ 56471	Beaver Creek, near mouth, Henry Ellen, Jefferson Co., AL		
	UMMZ 56469	Little Cahaba River, Leeds, Jefferson Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia carinifera</i>	UMMZ 59299	Five Mile Creek, 5 mi NE of Birmingham, Jefferson Co., AL		
	UMMZ 66002	Peavine Creek, Pelham, Shelby Co., AL		
	UMMZ 66001	Little Cahaba River, 4 mi below Leeds, Jefferson Co., AL		
	UMMZ 66003	Buck Creek, Helena, Shelby Co., AL		
	UMMZ 67084	Spring Creek, 4 mi NE of Montevallo, Shelby Co., AL	H.H. Smith	
<i>Elimia carinocostata</i>	ANSP 163062	Little Cahaba River, 2 miles E of Leeds. Jefferson Co., AL	W.J. Clench and H. Vander Schalie	
	ANSP 169566	Little Cahaba River, 4 miles S of Leeds, Jefferson Co., AL	H.H. Smith	
	ANSP 177054	Cahaba River, Shelby Co., AL	C. Goodrich	
	ANSP 153258	Cahaba River, Indian Springs, Shelby Co., AL	H.E. Wheeler	
	ANSP 169565	Little Cahaba River, 2 miles N of Leeds, Jefferson Co., AL	H.H. Smith	
	ANSP 169567	Little Cahaba River, 1 mile S of Leeds, Jefferson Co., AL	H.H. Smith	
	FLMNH 70455	Spring Creek, 5 mi SW of Calera, mud pool below mill dam, Shelby Co., AL	H.H. Smith	1904
	FLMNH 72950	Turner's Spring Branch, Montevallo, Shelby Co., AL	Dr. Smith	
	FLMNH 73030	Daley Creek, Shelby Co., AL	Aldrich coll., Leg:UA	
	FLMNH 73262	Spring 6 mi N of Montevallo, Shelby Co., AL	Leg: UA	
	FLMNH 36089	Bolton Spring, 5.8 air mi, NNE of Montevallo, Shelby Co., AL	R.T. Jones	March 1, 1979
	FLMNH 72999	Spring Creek, 4 mi NE of Montevallo, Shelby Co., AL	H.H. Smith, Leg: UA, Ex: T.H. Aldrich	June 1904
	FLMNH 73020	Creek near Whitney, St. Clair Co., AL	H.H. Smith, Leg: UA	July 1911
	FLMNH 73556	Buck Creek, AL	Leg: UA	
	FLMNH 73477	Cahaba River, AL	Aldrich coll., Leg:UA	
	FLMNH 73468	Camp Branch near Shelby Springs, AL	Ex: Aldrich, Leg:UA	
	FLMNH 73470	Turner's Spring Branch, AL	Dr. E.A. Smith, Leg: UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia carinocostata</i>	FLMNH 73398	Small Creek, 2 mi N of Calera, Bibb Co., AL	Leg: UA	
	FLMNH 73370?	Cahaba River, Pratt's Ferry, Bibb Co., AL	Leg: UA	
	FLMNH 73465	Cane Creek, Bibb Co., AL	Leg: UA	
	FLMNH 232110	Knoxville Creek, 1.6 mi SW of Argo, Little Cahaba River drainage, Jefferson Co., AL	F.G. Thompson	November 19, 1975
	FLMNH 232109	Cahaba River, Trussville, Jefferson Co., AL	F.G. Thompson	November 19, 1975
	FLMNH 73513	Little Cahaba River, Leeds, Jefferson Co., AL	H.H. Smith	August 1912
	FLMNH 73506	Cahaba Creek, near Leeds, Jefferson Co., AL	H.H. Smith	August 1912
	FLMNH 73400	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	1912
	FLMNH 73438	Little Cahaba River, 2 mi NE of Leeds, Jefferson Co., AL	Leg: UA, Ex: Clench-van der Schalie	1933
	FLMNH 73375	Blue Pond Spring, branch to Cahaba Creek, Leeds, Jefferson Co., AL	Leg: UA, Aldrich coll.	
	FLMNH 232111	Clear Branch, 0.4 mi W of Argo, Little Cahaba River drainage, Jefferson Co., AL	F.G. Thompson	November 19, 1975
	FLMNH 73567	Little Cahaba River, 2 mi N of Leeds, Jefferson Co., AL	Leg: UA	1935
	FLMNH 73591	Little Cahaba River, 1 mi S of Leeds, Jefferson Co., AL	Leg: UA	
	FLMNH 73371	Beaver Creek near junction with Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	August 21, 1912
	FLMNH 73568	Little Cahaba River, 4 mi below Leeds, Jefferson Co., AL	Leg: UA	1935
	FLMNH 73557	Five Mile Creek, 5 mi NE of Birmingham, Jefferson Co., AL	Leg: UA	1937
	FLMNH 73570	Spring Branch, East of Trussville, St. Clair Co., AL	Leg: UA	
	FLMNH 73512?	Town Creek, Montevallo, Shelby Co., AL	H.H. Smith, Leg: UA, Aldrich coll.	1904
	FLMNH 73577	Shelby Springs, Shelby Co., AL	E.A. Smith	
	FLMNH 73549	Camp Branch near Shelby Springs, AL	Dr. E.A. Smith, Leg: UA	
	FLMNH 73543?	Shoal Creek, Montevallo, Shelby Co., AL	Leg: UA, Aldrich coll.	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia carinocostata</i>	FLMNH 73542	Cahaba River @ mouth of Buck Creek, near Helena, Shelby Co., AL	Leg: UA	
	FLMNH 73524	Davis Creek, Aldrich mine, Montevallo, Shelby Co., AL	Leg: UA, Aldrich coll.	
	FLMNH 229985?	Indian Springs, Shelby Co., AL	Leg: Beal-Maltbie coll.	February 3, 1931
	FLMNH 73498	Town Creek, Montevallo, Shelby Co., AL	H.H. Smith	1904
	FLMNH 73518	Spring Creek, Montevallo, Shelby Co., AL	H.H. Smith	1904
	FLMNH 229986	Indian Springs, Shelby Co., AL	Leg: Beal-Maltbie coll.	
	UMMZ 241589	Montevallo, Shelby Co., AL		
	UMMZ 128928	Buck Creek, Helena, Shelby Co., AL		
	UMMZ 66016	Peavine Creek, Pelham, Shelby Co., AL		
	UMMZ 66015	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 66014	Cahaba River, near Myrtle, Jefferson Co., AL		
	UMMZ 66013	Cahaba River, Grant's Mill below First Sam, Jefferson Co., AL		
	UMMZ 66011	Cahaba River, near Roper, Jefferson Co., AL		
	UMMZ 66010	Cahaba River, 1/4 mi above Trussville, Jefferson Co., AL		
	UMMZ 66007	Little Cahaba River, 1 mi S of Leeds, Jefferson Co., AL		
	UMMZ 66008	Little Cahaba River, 4 mi below Leeds, Jefferson Co., AL		
	UMMZ 54271	Five Mile Creek, 5 mi NE of Birmingham, Jefferson Co., AL		
	UMMZ 66006	Little Cahaba River, 2 mi N of Leeds, Jefferson Co., AL		
	UMMZ 65091	Spring Creek, near mouth, Shelby Co., AL		
	UMMZ 63331	Shoal Creek, near Montevallo, Shelby Co., AL		
	UMMZ 57884	Cahaba River, 2 mi E of Roper, Jefferson Co., AL		
	UMMZ 57887	Little Cahaba River, 2 mi NE of Leeds, Jefferson Co., AL		
	UMMZ 55769	Cahaba River, Leeds, Jefferson Co., AL		
	UMMZ 56371	East Cahaba River, St. Clair Co., AL		
	UMMZ 55107	Little Cahaba River, Leeds, Jefferson Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia carinocostata</i>	UMMZ 55165	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	1912
	UMMZ 49213	Cahaba River, 1 mi N of Ackton, AL		
	UMMZ 42536	Buck Creek, Helena, Shelby Co., AL		
<i>Elimia clara</i>	ANSP 177046	Cahaba River, Lilly Shoals, Bibb Co., AL	C. Goodrich	
	ANSP 169569	Cahaba River, Lovick, Jefferson Co., AL	H.H. Smith	1935
	ANSP 169570	Cahaba River, Grants Mill, AL	H.H. Smith	
	ANSP 169571	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL	H.H. Smith	
	ANSP 175651	Cahaba River, Old Tuscaloosa Pike Road, Shelby Co., AL		
	ANSP 175647	Cahaba River, W of Henry Ellan, Jefferson Co., AL	H.H. Smith	
	ANSP 177041	Cahaba River, AL	C. Goodrich	
	ANSP 177043	Cahaba River, AL	C. Goodrich	
	ANSP 169572	Cahaba River, Shelby Co., AL	H.H. Smith	
	ANSP 175649	Cahaba River, Lorick, Jefferson Co., AL		
	ANSP 175648	Cahaba River, Grants Mill, Jefferson Co., AL		
	ANSP 169568	Cahaba River, W of Henry Ellan, Jefferson Co., AL	H.H. Smith	
	ANSP 177045	Cahaba River, Lilly Shoals, Bibb Co., AL	C. Goodrich	
	ANSP 177044	Cahaba River, AL	C. Goodrich	
	ANSP 122379	Cahaba River, Montevallo, Shelby Co., AL	C.M. Wheatley	
	ANSP 163057	Little Cahaba River, 2 miles NE of Leeds, Jefferson Co., AL	W.J. Clench and H. Vander Schalie	
	FLMNH 73763	Cahaba River, near Henry Ellen, Jefferson Co., AL	H.H. Smith	August 25, 1912
	FLMNH 73764	Cahaba River, below first dam, Grant's Mill, Jefferson Co., AL	Leg: UA	1935
	FLMNH 73647	Little Cahaba River, Leeds, Cahaba Creek, Jefferson Co., AL	H.H. Smith	August 1912
	FLMNH 73618	Cahaba River, W of Henry Ellen, Jefferson Co., AL	Leg: UA	1936
	FLMNH 73732	Cahaba River, @ Daums Old Mill, Jefferson Co., AL	Aldrich coll., Leg:UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia clara</i>	FLMNH 73622	Cahaba River, Lorich, Jefferson Co., AL	Leg: UA	
	FLMNH 73662	Cahaba River, @ Samson's Old Mill, Jefferson Co., AL	Aldrich coll., Leg:UA	
	FLMNH 73765	Montevallo Creek, Shelby Co., AL	Showalter coll., Leg: UA	
	FLMNH 73638	Montevallo Creek, Shelby Co., AL	Aldrich coll., Leg:UA	
	FLMNH 1582	Cahaba River, Lovick, Jefferson Co., AL	C. Goodrich, H. van der Schalie	September 4, 1935
	FLMNH 73625	Cahaba River, Grant's Mill, below second dam, Jefferson Co., AL	Leg: UA	1935
	FLMNH 73741	Little Cahaba River, 2 mi NE of Leeds, Jefferson Co., AL	Leg: UA, Ex: Clench-van der Schalie	
	FLMNH 73772	Cahaba River, Lorick, Jefferson Co., AL	Leg: UA	1935
	FLMNH 73774	Cahaba River, near Buck Creek, Shelby Co., AL	Leg: UA	July 1, 1913
	FLMNH 73725	Buck Creek, Shelby Co., AL	Leg: UA	
	FLMNH 73743	Town Creek, Montevallo, Shelby Co., AL	H.H. Smith, Leg: UA	1904
	FLMNH 73639	Junction of Buck Creek and Cahaba River, Shelby Co., AL	Leg: UA, Aldrich coll.	
	FLMNH 73643	Cahaba River, near Anita, Shelby Co., AL	H.H. Smith, Leg: UA	
	FLMNH 73744	Buck Creek, Helena, Shelby Co., AL	Leg: UA, Aldrich coll.	
	FLMNH 73759	Shades Creek, branch of Cahaba River, Shelby Co., AL	Leg: UA	
	FLMNH 73657	Cahaba River, near Anita, Shelby Co., AL	H.H. Smith, Leg: UA, Ex: Aldrich	September 1906
	FLMNH 73655	Cahaba River, mouth of Buck Creek, near Helena, Shelby Co., AL	H.H. Smith, Leg: UA	July 1, 1913
	FLMNH 73614	Cahaba River, old Tuscaloosa crossing, Shelby Co., AL	Leg: UA	
	FLMNH 73768	Cahaba River, old Tuscaloosa Pike crossing, Shelby Co., AL	Leg: UA	
	FLMNH 73629	Cahaba River, W of Helena, Nunley Ford, Shelby Co., AL	Leg: UA	
	FLMNH 73721	Camp Branch near Shelby Springs, AL	Leg: UA, Ex: Aldrich	
	FLMNH 73755	Little Cahaba River, AL	Leg: UA	
	FLMNH 73626	Cahaba River, Pratt's Ferry, AL	Leg: UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia clara</i>	FLMNH 73673	Cahaba River, Lily Shoals, Bibb Co., AL	Leg: UA	
	FLMNH 73676	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith, Leg:UA	
	FLMNH 73684	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith, Leg:UA	
	FLMNH 73747?	Small creek joining Cahaba River, 10 mi S of Helena, Bibb Co., AL	Leg: UA	
	FLMNH 73646	Cahaba River, 7 mi NE of Centreville, Bibb Co., AL	Leg: UA	
	FLMNH 73706	Cahaba River, Lily Shoals, Bibb Co., AL	T.H. Aldrich, Leg: UA	
	OSUM 15895	Little Shultz Creek, at Little Shultz Church, 5.5 mi S of W Blocton, Bibb Co., AL	T.D. Richardson	August 13, 1984
	UMMZ 241595	Cahaba River, AL	P.L. March	
	UMMZ 128927	Cahaba River, near Anita, Shelby Co., AL	H.H. Smith	
	UMMZ 128926	Cahaba River, 10 mi above Centerville, Bibb Co., AL		
	UMMZ 133710	Cahaba River, near Ardela, Bibb Co., AL	H.E. Wheeler	
	UMMZ 133711	Cahaba River, Pine Island, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 134122	Cahaba River, mouth of Little Cahaba, Bibb Co., AL		
	UMMZ 134123	Cahaba River, Wildcat Island, Lily Shoals, Bibb Co., AL		
	UMMZ 241594	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 66721	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL		
	UMMZ 128919	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	
	UMMZ 128920	Cahaba River, 7 mi above Centerville, Bibb Co., AL		
	UMMZ 128924	Cahaba River, Lily Shoals rapids, above bridge near Blocton, Bibb Co., AL		
<i>Elimia cochlearis</i>	FLMNH 232132	Tannehill Spring, 1.2 mi S of Bucksville, Tuscaloosa Co., AL	Thompson	October 23, 1975
	FLMNH 230164	Big Prairie Creek, AL 61, Hale Co., AL	P. Hartfield	June 18, 1991
	FLMNH 74052	Spring near Tannehill Station, Tuscaloosa Co., AL	E.A. Smith	
	FLMNH 74054	Spring on bank of Cahaba River, Jefferson Co., AL	H.H. Smith, Leg: UA	August 22, 1912

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia cochliaris</i>	FLMNH 230343	Little Cahaba River, 4 mi above Cahaba River, Bibb Co., AL	Thompson	June 22, 1978
	FLMNH 74057	Spring branch by Little Cahaba River, near road from Piper to Montevallo, Bibb Co., AL	H.H. Smith, Leg: UA	August 1918
	FLMNH 232130	Ebenezer Church, Montevallo, Shelby Co., AL	M. Carpenter	March 28, 1978
	FLMNH 74056	Big Spring, Blocton, AL	Leg: UA	
	FLMNH 74055	Spring branch flowing to Cahaba Creek, 6 mi above Leeds, Jefferson Co., AL	H.H. Smith, Leg: UA	August 20, 1912
	UMMZ 54342	Spring Branch of Little Cahaba River, near Piper, Bibb Co., AL		
	UMMZ 55720	Cooley Creek, Jefferson Co., AL		
	UMMZ 155243	Abernathy Springs, Jefferson Co., AL		
	UMMZ 55242	Spring Mill Creek, Cahaba River, Tannehill, Tuscaloosa Co., AL		
	UMMZ 55774	Branch at Leeds, Jefferson Co., AL		
	UMMZ 55773	Spring at Leeds, Jefferson Co., AL		
	UMMZ 55723	Pineview Spring, Little Cahaba River, Jefferson Co., AL		
<i>Elimia olivula</i>	ANSP 124853	Alabama River, Steamplant landing, Dallas Co., AL		
	ANSP 27587	Cahaba River, AL		
	ANSP 125168	Alabama River, Selma, Dallas Co., AL		
	ANSP 122377	Alabama River, Selma, Dallas Co., AL	H. van der Schalie	
	FLMNH 75368	Cahaba River, near Anita, Bibb Co., AL	H.H. Smith	1906
	FLMNH 75381	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call, Leg:UA, Ex: Aldrich	
	FLMNH 75393	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith, Leg:UA	August 1918
	FLMNH 75431	Cahaba River, Selma, Dallas Co., AL	Leg: UA	
	FLMNH 75413	Cahaba River, Shelby Co., AL	Aldrich coll., Leg:UA	
	FLMNH 75404	Cahaba River, 8 mi N of Sprott, Perry Co., AL	Leg: UA	1915

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia olivula</i>	FLMNH 75407	Lower Cahaba River, AL	Showalter coll., Leg: UA	
	UMMZ 57806	Alabama River, Selma, Dallas Co., AL		
	UMMZ 57810	Alabama River, Claiborne, Monroe Co., AL		
	UMMZ 57865	Alabama River, 12 mi SSW of Selma, Dallas Co., AL		
	UMMZ 57866	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 57802	Alabama River, 6 mi N of Tyler, Dallas Co., AL		
	UMMZ 54191	Alabama River, Selma, Dallas Co., AL	Aldrich	
	UMMZ 128921	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 66305	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
<i>Elimia pupaeformis</i>	ANSP 125163	Alabama River, AL		
	ANSP 169573	Cahaba River, 8 miles N of Sprett, Perry Co., AL	H.H. Smith	
	ANSP 163054	Cahaba River, 10 miles W of Selma, Dallas Co., AL	W.J. Clench and H. van der Schalie	
	ANSP 163058	Cahaba River, 12 miles SW of Selma, Dallas Co., AL		1933
<i>Elimia pupaeformis</i>	ANSP 163055	Alabama River, 6 miles from Tyler, Dallas Co., AL	W.J. Clench and H. van der Schalie	1934
	ANSP 125093	Cahaba River, AL		
<i>Elimia pupoidea</i>	FLMNH 75599	Cahaba River, 8 mi N of Sprott, Perry Co., AL	Leg: UA	
	FLMNH 75600	Cahaba River, AL	Aldrich, Leg: UA	1878
	FLMNH 75607	Alabama River and Cahaba River, AL	Leg: UA	
	FLMNH 75644	Cahaba River, near mouth, AL	Leg: UA	
	FLMNH 75634	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith, Leg:UA	1918
	FLMNH 75685	Lower Cahaba River, AL	Leg: UA, Showalter coll.	
	FLMNH 75636	Cahaba River, 12 mi SSW of Selma, Dallas Co., AL	Clench et al., Leg:UA	1933
	FLMNH 75625	Cahaba River, 10 mi W of Selma, Dallas Co., AL	Ex: UMMZ, Leg:UA	1933
	FLMNH 75589	Cahaba River, Lily Shoals, Bibb Co., AL	Ex: Aldrich, Leg:UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia pupoidea</i>	OSUM 599a	Cahaba River, 1 mi above US Rt 80, Dallas Co., AL	T. Watters	October 16, 1993
	UMMZ 57803	Alabama River, 6 mi N of Tyler, Dallas Co., AL		
	UMMZ 133713	Cahaba River, Dallas Co., AL		
	UMMZ 37811	Cahaba River, Selma, Dallas Co., AL		
	UMMZ 55740	Cahaba River, Selma, AL		
	UMMZ 56007	Cahaba River, AL		
	UMMZ 57863	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	UMMZ 57864	Cahaba River, 18 mi SSW of Selma, Dallas Co., AL		
	UMMZ 57867	Cahaba River, 0.5 mi W of Felix, Dallas Co., AL		
	UMMZ 57868	Cahaba River, 5 mi NE of Marion, Perry Co., AL		
	UMMZ 66306	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 66307	Cahaba River, 12 mi W of Selma, Dallas Co., AL		1935
<i>Elimia showalteri</i>	ANSP 169576	Cahaba River, Lilly Shoals near Blocton, Bibb Co., AL	H.H. Smith	
	ANSP 163026	Cahaba River, Lilly Shoals, Bibb Co., AL	W.J. Clench and H. Vander Schalie	
	ANSP 85031	Cahaba River, Lilly Shoals, Bibb Co., AL	C.M. Wheatley	
	ANSP 177049	Cahaba River, Lilly Shoals, Bibb Co., AL	C. Goodrich	
	ANSP 177048	Cahaba River, Pratts Ferry, Bibb Co., AL	C. Goodrich	
	ANSP 177051	Cahaba River, near mouth of Little Cahaba River, Bibb Co., AL	C. Goodrich	
	ANSP 169575	Cahaba River, Lilly Shoals, near Blocton, Bibb Co., AL	H.H. Smith	
	ANSP 177050	Cahaba River, AL	C. Goodrich	
	FLMNH 75924	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	
	FLMNH 75951	Cahaba River, Lily Shoals, E of Blocton, Bibb Co., AL	Leg: UA	
	FLMNH 75917	Cahaba River, 1 mi above Centreville, Bibb Co., AL	Leg: UA	
	FLMNH 75923	Cahaba River, near Pratt's Ferry, Bibb Co., AL	Leg: UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia showalteri</i>	FLMNH 75915	Cahaba River, rapids above bridge, near Blocton, Bibb Co., AL	Leg: UA	
	FLMNH 75934	Buck Creek, Shelby Co., AL	Leg: UA, Aldrich coll.	
	FLMNH 75888	Cahaba River, near Anita, Shelby Co., AL	Leg: UA, Ex: Aldrich, H.H. Smith	
	FLMNH 86017	Cahaba River, Pine Island near Ardela, AL	Leg: UA	
	FLMNH 75925	Cahaba River, near mouth of Little Cahaba River, AL	Leg: UA	
	FLMNH 75846	Cahaba River, 7 mi NE of Centreville, Bibb Co., AL	Leg: UA	
	OSUM 598a	Cahaba River, 1 mi above US Rt 80, Dallas Co., AL	T. Watters	October 16, 1993
	OSUM 1743	Cahaba River, AL		
	UMMZ 133715	Cahaba River, near mouth of Little Cahaba River, Bibb Co., AL	H.E. Wheeler	
	UMMZ 66051	Cahaba River, Lily Shoals, rapids above bridge near Blocton, Bibb Co., AL		
	UMMZ 128935	Cahaba River, 7 mi above Centerville, Bibb Co., AL	H. van der Schalie and W. J. Clench	
	UMMZ 57873	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 57878	Cahaba River, Centerville, Bibb Co., AL		
	UMMZ 57879	Cahaba River, 2 mi E of Harrisburg, Bibb Co., AL		
	UMMZ 66046	Cahaba River, 10 mi above Centerville, Bibb Co., AL		1935
	UMMZ 66047	Cahaba River, 1 mi above Centerville, Bibb Co., AL		
	UMMZ 66048	Cahaba River, 7 mi below Centerville, Bibb Co., AL		
	UMMZ 66049	Cahaba River, Lily Shoals, in current bridge near Blocton, Bibb Co., AL		
	UMMZ 54209	Cahaba River, near Piper, Bibb Co., AL		August 1918
	UMMZ 19196	Cahaba River, AL		
	UMMZ 37301	Cahaba River, Bibb Co., AL		
	UMMZ 37802	Cahaba River, Lily Shoals, Bibb Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia varians</i>	ANSP 125107	Cahaba River, AL		
	ANSP 27686	Cahaba River, AL	E.R. Showalter	
	FLMNH 261848	Little Cahaba River, @ Co. Rt. 10 bridge, 3.6 mi NW of Ashby, Bibb Co., AL	T. Watters	July 29, 1986
	FLMNH 230336	Cahaba River, 6.5 mi NE of Centreville, Bibb Co., AL	F.G. Thompson	June 21, 1978
	FLMNH 76326	Cahaba River, near Piper, Bibb Co., AL	Leg: UA	June 12, 1916
	FLMNH 76357	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call, Leg: UA, Ex: Aldrich	
	FLMNH 131224	Cahaba River, Pratt's Ferry, Bibb Co., AL	Leg: UA	
	FLMNH 238054	Near mouth of Little Cahaba River, AL	Leg: Beal-Maltbie coll	
	FLMNH 76328	Centreville, Bibb Co., AL	Leg: UA, Showalter coll.	
	FLMNH 76347	Cahaba River, Pratt's Ferry, Bibb Co., AL	H.H. Smith, Leg: UA	June 9, 1912
	OSUM 604	Little Cahaba River, Co. Rt. 10, 3.6 mi NW of Ashby, Bibb Co., AL	B. Kasson, T. Watters	July 29, 1986
	UMMZ 66304	Cahaba River, 7 mi below Centerville, Bibb Col., AL		
	UMMZ 66302	Cahaba River, 10 mi above Centerville, Bibb Col., AL		
	UMMZ 128936	Cahaba River, 10 mi above Centerville, Bibb Col., AL		
	UMMZ 133716	Cahaba River, near mouth of Little Cahaba River, Bibb Co., AL	H.E. Wheeler	
	UMMZ 57872	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
<i>Elimia variata</i>	ANSP 152055	Cahaba River, Bishops Creek, 1 1/2 mile S of Acton, Shelby Co., AL	W.J. Clench and K. Okelburg	Aug. 29, 1929
	ANSP 177035	Little Cahaba River, Bibb Co., AL	C. Goodrich	
	ANSP 177036	Cahaba River, Buck Creek, Shelby Co., AL	C. Goodrich	
	ANSP 169580	Cahaba River, Buck Creek, Shelby Co., AL	H.H. Smith	
	ANSP 179078	Little Cahaba River, McGuire Shoals, Bibb Co., AL	C. Goodrich	
	ANSP 177037	Cahaba River, Clear Creek, Shelby Co., AL	C. Goodrich	
	ANSP 177038	Little Cahaba River, AL	C. Goodrich	
	FLMNH 232490	Little Cahaba River, 4.5 mi NE of Six Mile, Bibb Co., AL	F.G. Thompson	October 22, 1975

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia variata</i>	FLMNH 232492	Schultz Creek, 4.2 mi N of Centreville, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 232488	Little Cahaba River, 3.4 mi NNW of Six Mile, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 232491	Schultz Creek, 5.3 mi N of Centreville, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 47269	Cahaba River, Lily Shoals, 2 mi N Rt 24, Bibb Co., AL	H. Lee	October 22, 1975
	FLMNH 76281	Little Cahaba Creek, Bibb Co., AL	H.H. Smith, Leg: UA	1918
	FLMNH 76240	Six Mile Creek, 2.5 mi NW of Six Mile, Bibb Co., AL	A.F. Archer, Leg:UA	May 20, 1935
	FLMNH 76211	Bishop Creek, 1.5 mi S of Acton, AL	Leg: UA	
	FLMNH 76231	Dudleyville, AL	Leg: UA, Aldrich coll	
	FLMNH 76293	Buck Creek and Cahaba River junction, AL	Leg: UA, Ex: Aldrich	
	FLMNH 230323	Little Cahaba River, 2 mi above Cahaba River, Bibb Co., AL	F.G. Thompson, Ultsch	
	FLMNH 230346	Little Cahaba River, 4 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	
	FLMNH 230326	Six Mile Creek, 0.3 mi above Little Cahaba River, Bibb Co., AL	F.G. Thompson	
	FLMNH 230312	Little Cahaba River, 5 mi above Cahaba River, Bibb Co., AL	F.G. Thompson, G. Ultsch	
	FLMNH 230350	Little Cahaba River, 1.5 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	
	FLMNH 230317	Little Cahaba River, 3 mi above Cahaba River, Bibb Co., AL	F.G. Thompson, G. Ultsch	
	FLMNH 76196	Cahaba River, Lily Shoals, Bibb Co., AL	Leg: UA, Aldrich coll	
	FLMNH 76303	Six Mile Creek, Six Mile, Bibb Co., AL	Leg: UA	
	FLMNH 76199	Cane Creek, Bibb Co., AL	Leg: UA	
	FLMNH 36081	Gary Spring, 4.0 air mi ENE Centreville, Bibb Co., AL	T.R. Jones	
	FLMNH 76260	Little Cahaba Creek, 3 mi E of Piper, Bibb Co., AL	H.H. Smith	June 1916
	FLMNH 232486	Creek, 1 mi E West Blocton, Bibb Co., AL	Thompson	October 22, 1975
	FLMNH 76215	Little Cahaba River, SE of Piper, Bibb Co., AL	Leg: UA	1935
	FLMNH 76224	Buck Creek, Shelby Co., AL	Leg: UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia variata</i>	FLMNH 76228	Buck Creek, Montevallo, Shelby Co., AL	R.E. Call, Leg:UA	
	FLMNH 76223	Buck Creek, Shelby Co., AL	Leg: UA	
	FLMNH 76225	Cahaba Creek, Leeds, Jefferson Co., AL	Leg: UA	
	FLMNH 76226	Cahaba Creek, Leeds, Jefferson Co., AL	H.H. Smith, Leg:UA	August 1912
	FLMNH 76202	Cahaba Creek, Leeds, Jefferson Co., AL	Leg: UA	
	FLMNH 76200	Cahaba Creek, near Henry Ellen, Jefferson Co., AL	Leg: UA	August 25, 1912
	FLMNH 76283	Little Cahaba River, Jefferson Co., AL	Leg: UA, H.H. Smith	June 1916
	FLMNH 76252	Junction of Buck Creek and Cahaba River, Shelby Co., AL	Leg: UA, Aldrich coll	
	FLMNH 76255	Montevallo, Shelby Co., AL	Leg: UA, Showalter coll.	
	FLMNH 76251	Spring Creek, Montevallo, Shelby Co., AL	H.H. Smith, Leg:UA, Ex: Aldrich	June 1904
	FLMNH 76206	Buck Creek, Helena, Shelby Co., AL	H.H. Smith, Leg:UA	
	FLMNH 76295	Shoal Creek, Montevallo, Shelby Co., AL	R.E. Call, Leg:UA, Ex: Aldrich	
	FLMNH 76210	Buck Creek, Shelby Co., AL	Leg: UA	1935
	FLMNH 76204	Ravine Creek @ Pelham, Shelby Co., AL	Leg: UA	
	FLMNH 76203	Spring by Spring Creek, 4 mi NE of Montevallo, Shelby Co., AL	R.E. Call, Leg:UA, Ex: Aldrich	June 1904
	FLMNH 230317	Little Cahaba River, 3 mi above Cahaba River, Bibb Co., AL	F.G. Thompson, G. Ultsch	June 21, 1978
	FLMNH 232489	Bishop Creek, S of Acton, AL	Ex: Maxwell Smith coll.	
	FLMNH 230184	Cahaba River, Bulldog Bend, Shelby Co., AL	G. Ultsch	August 1, 1978
	FLMNH 76232	Spring Creek, Ebenezer Church, 6 mi N of Montevallo, Shelby Co., AL	H.H. Smith, Leg:UA	
	FLMNH 76269	Davis Creek, Aldrich Mine, Montevallo, Shelby Co., AL	Leg:UA, Aldrich coll	
	OSUM 18181	Little Cahaba River, Co. Rt. 10 bridge, 3.6 mi NW of Ashby, 5.3 mi ESE of Coleanor, Bibb Co., AL	G.T. Watters, W. Kasson	July 29, 1986
	UMMZ 19709	Buck Creek, Shelby Co., AL		
	UMMZ 37735	Spring Creek, Montevallo, Shelby Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Elimia variata</i>	UMMZ 37739	Cahaba River, McGuire Shoals, AL		
	UMMZ 63860	Six Mile Creek, 2.5 mi NW of Six Mile, Bibb Co. AL		
	UMMZ 66052	Little Cahaba River, 1 mi below Leeds, Jefferson Co., AL		
	UMMZ 60053	Little Cahaba River, 4 mi below Leeds, Jefferson Co., AL		
	UMMZ 66054	Cahaba River, Old Tuscaloosa Pike crossing, Shelby Co., AL		
	UMMZ 66055	Peavine Creek, Pelham, Shelby Co., AL		
	UMMZ 66056	Buck Creek, Helena, Shelby Co., AL		
	UMMZ 66057	Town Creek, Montevallo, Shelby Co., AL		
	UMMZ 63860	Six Mile Creek, 2.5 mi above Six Mile, Bibb Co. AL		
	UMMZ 55751	Shoal Creek, near Wilfon, Shelby Co., AL		
	UMMZ 55742	Cahaba River, Lily Shoals, Bibb Co. AL		
	UMMZ 55746	Cahaba River, mouth of Buck Creek, Shelby Co., AL		
	UMMZ 55997	Cane Creek, E of Woodstock, Bibb Co., AL		
	UMMZ 133718	Little Cahaba River, McGuire Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 243247	Cahaba River, @ US 31, Jefferson Co. AL	L. Hubricht	October 2, 1960
	UMMZ 214755	Buck Creek, Shelby Co., AL	P.L. Marsh	
	UMMZ 66059	Six Mile Creek, Six Mile, Bibb Co., AL		
	UMMZ 66060	Little Cahaba River, SE of Piper, Bibb Co., AL		
	UMMZ 66284	Shoal Creek, near Anita, Shelby Co., AL		
	UMMZ 66285	Cahaba River, Lily Shoals, Bibb Co. AL	R.E. Call	
	UMMZ 68221	Spring Creek, 4 mi NW of Calena, Shelby Co., AL	H.H. Smith	
<i>Leptoxis ampla</i>	AMNH 61842	Cahaba River, AL		
	AMNH 69298	Cahaba River, AL		
	ANSP 157273	Cahaba River, AL	J. Lewis Collection	
	ANSP 124868	Cahaba River, AL		
	ANSP 27625	Cahaba River, AL	H. Moores	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Leptoxis ampla</i>	ANSP 163028	Cahaba River, Lilly Shoals, Bibb Co., AL	W.J. Clench and H. Vander Schalie	
	ANSP 163069	Cahaba River, 1 mile NE of Centerville, Bibb Co., AL	W.J. Clench and H. Vander Schalie	
	ANSP 163050	Cahaba River, 7 miles NE of Centerville, Bibb Co., AL		1933
	ANSP 169557	Cahaba River, Lilly Shoals, Bibb Co., AL	H.H. Smith	
	FLMNH 230318	Little Cahaba River, 3 mi above Cahaba River, Bibb Co., AL	F.G. Thompson, G. Ultsch	June 21, 1978
	FLMNH 230331	Little Cahaba River, 1.5 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
	FLMNH 230330	Six Mile Creek, 0.3 mi above Little Cahaba River, Bibb Co., AL	F.G. Thompson	June 21, 1978
	MFM 61842	Cahaba River, AL	H.D. Athearn	
	MFM 69298	Cahaba River, AL	H.D. Athearn	
	OSUM 605a	Little Cahaba River, Co. Rt. 10, 3.6 mi NW of Ashby, Bibb Co., AL	B. Kasson, T. Watters	July 29, 1986
	OSUM 18180	Little Cahaba River, Co. Rt. 10 bridge, 3.6 mi NW of Ashby, 5.3 mi ESE of Coleanor, Bibb Co., AL	G.T. Watters, William, Kasson	July 29, 1986
	UMMZ 39934	Cahaba River, AL		
	UMMZ 39932	Shade Creek, Anita, Shelby Co., AL		
	UMMZ 39931	Shade Creek, Anita, Shelby Co., AL		
	UMMZ 39930	Cahaba River, Centerville, Bibb Co., AL		
	UMMZ 39929	Cahaba River, Dallas Co., AL		
	UMMZ 39928	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 39926	Cahaba River, near Piper, Bibb Co., AL		
	UMMZ 39925	Cahaba River, Pratt's Ferry, Bibb Co., AL		
	UMMZ 39935	Little Cahaba River, AL		
	UMMZ 66020	Cahaba River, Old Tuscaloosa Pike, Shelby Co., AL		
	UMMZ 66019	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Leptoxis ampla</i>	UMMZ 66018	Cahaba River, 1 mi below Leeds, Jefferson Co., AL		
	UMMZ 63223	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 56509	Little Cahaba River, Bibb Co., AL		
	UMMZ 49273	Cahaba River, Lily Shoals, Bibb Co., AL		
	UMMZ 34936	Buck River, AL		
	UMMZ 67088	Little Cahaba River, McGuire Shoals, Bibb Co., AL		
	UMMZ 63862	Six Mile Creek, 2-5 mi N of Six Mile, Bibb Co., AL		
	UMMZ 66024	Cahaba River, 1 mi above Centerville, Bibb Co., AL		
	UMMZ 66021	Cahaba River, Lily Shoals, Rapids above bridge near Blocton, Bibb Co., AL		
	UMMZ 169644	Schultz Creek, Centerville, Bibb Co., AL	Frank Rice	1947
	UMMZ 133898	Shoal Creek, Montevallo, Shelby Co., AL	H.H. Smith	
	UMMZ 243320	Cahaba River, Centerville, Bibb Co., AL	L. Hubricht	August 20, 1960
	UMMZ 243321	Alabama River, Choctaw Bluff, Clarke Co., AL	L. Hubricht	December 11, 1965
	UMMZ 57870	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
<i>Leptoxis compacta</i>	ANSP 85033	Cahaba River, AL	C.M. Wheatley	
	ANSP 120777	Cahaba River, AL		
	ANSP 26901	Cahaba River, AL	H.A. Pilsbry	1893
	ANSP 110812	Cahaba River, AL	W.H. Over	
	ANSP 163024	Cahaba River, Lilly Shoals, Bibb Co., AL	W.J. Clench, H. van der Schalie	1933
	ANSP 26903	Cahaba River, AL	E.R. Showalter	
	FLMNH 81186	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	FLMNH 81144	Cahaba River, Lily Shoals, Bibb Co., AL	H. van der Schalie, W.J. Clench	1931
	FLMNH 81165	Cahaba River, Pratt's Ferry, Bibb Co., AL		
	FLMNH 81190	Cahaba River, near Piper, Bibb Co., AL	H.H. Smith	June 1916

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Leptoxis compacta</i>	FLMNH 81191	Cahaba River, Shelby Co., AL		
	FLMNH 81140	Cahaba River, Henry Ellen, Jefferson Co., AL		
	FLMNH 81141	Cahaba River, Henry Ellen, Jefferson Co., AL		
	FLMNH 81151	Cahaba River, Pine Island, AL	H.H. Smith	November 4, 1909
	MFM 69332	Cahaba River, AL	H.D. Ahearn	
	UMMZ 51250	Cahaba River, Anita, Shelby Co., AL		
	UMMZ 54344	Cahaba River, Henry Ellen, Jefferson Co., AL	H.H. Smith	1912
	UMMZ 55741	Cahaba River, Lily Shoals, Bibb Co., AL	R.E. Call	
	UMMZ 57871	Cahaba River, 7 mi NE of Centerville, Bibb Co., AL		
	UMMZ 37475	Cahaba River, Piper, Bibb Co., AL		
	UMMZ 37478	Cahaba River, Peabody, AL		
	UMMZ 66026	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 66028	Cahaba River, Lily Shoals, rapids above bridge, near Blocton, Bibb Co., AL		
	UMMZ 66029	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 133967	Alabama River, Montgomery, Montgomery Co., AL	C.L. Allen	
	UMMZ 57815	Cahaba River, 10 mi W of Selma, Dallas Co., AL		
	ANSP 85033	Cahaba River, AL	C.M. Wheatley	
	ANSP 120777	Cahaba River, AL		
	ANSP 26901	Cahaba River, AL	H.A. Pilsbry	1893
	ANSP 110812	Cahaba River, AL	W.H. Over	
	ANSP 163024	Cahaba River, Lilly Shoals, Bibb Co., AL	W.J. Clench, H. van der Schalie	
	ANSP 26903	Cahaba River, AL	E.R. Showalter	1933
<i>Leptoxis picta</i>	AMNH 69871	Cahaba River, AL		
	AMNH 69881	Cahaba River, AL		

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Leptoxis picta</i>	ANSP 124878	Cahaba River, AL		
	ANSP 27630	Cahaba River, AL		
	FLMNH 81417	Cahaba River, Alabama		
	FLMNH 81415	Alabama River, Selma, Dallas Co., AL		
	FLMNH 81442	Alabama River, Selma, Dallas Co., AL	R.E. Call	
	MFM 69871	Cahaba River, AL	H.D. Athearn	
	MFM 69881	Cahaba River, AL	H.D. Athearn	
	UMMZ 39980	Coosa River, Wetumpka, Elmore Co., AL		
	UMMZ 10175	Alabama River, Selma, Dallas Co., AL		
	UMMZ 57800	Alabama River, 6 mi N of Tyler, Dallas Co., AL		
	UMMZ 57813	Cahaba River, 12 mi W of Selma, Dallas Co., AL		
	UMMZ 39983	Alabama River, Selma, Dallas Co., AL		
	UMMZ 133952	Cahaba River, AL	Showalter	
<i>Pleurocera foremani</i>	FLMNH 83675	Cahaba River, Pratt's Ferry, Bibb Co., AL	Leg: UA	
	UMMZ 39145	Cahaba River, AL		
	UMMZ 62638	Alabama River, Selma, Dallas Co., AL		
<i>Pleurocera parasinatum</i>	FLMNH 84197	Cahaba River, AL	Leg: UA	
	FLMNH 83995	Cahaba River, Centreville, AL	Leg: UA	
	FLMNH 193566	Cahaba River, 7.5 mi SW of Centreville, below Harrisburg bridge, Bibb Co., AL	M. Pierson, S. Puleo	July 28, 1990
	FLMNH 47277	Cahaba River, Suttle, Perry Co., AL	H. Lee	November 25, 1967
	FLMNH 84087	Cahaba River, AL	Leg: UA	
	FLMNH 83877	Near mouth of Cahaba River, AL	Leg: UA	
	FLMNH 84056	Cahaba River, AL	Leg: UA	
	FLMNH 84061	Prob. Close to mouth of Cahaba River, AL	Leg: UA	
	FLMNH 83939	Cahaba River, AL	Leg: UA	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Pleurocera parasinatum</i>	FLMNH 83834	Cahaba River, AL	Leg: UA	
	FLMNH 84021	Cahaba River, AL	Leg: UA	
	FLMNH 83774	Cahaba River, AL	Leg: UA	
	FLMNH 84033	Cahaba River, AL	R.E. Call, Leg: UA	
	FLMNH 83856	Near mouth of Cahaba River, AL	Leg: UA, Calkins coll.	
	FLMNH 83830	Cahaba River, AL	Leg: UA, Calkins coll.	
	FLMNH 84023	Cahaba River, AL	Dr. Showalter, Leg:UA	
	UMMZ 132747	Alabama River, Selma, Dallas Co., AL		
	UMMZ 66045	Cahaba River, 8 mi N of Sprott, Perry Co., AL		
	UMMZ 137669	Cahaba River, AL	Showalter collection	
<i>Pleurocera vestita</i>	ANSP 169582	Cahaba River, Lilly Shoals, Bibb Co., AL		
	ANSP 110809	Cahaba River, Buck Creek, Shelby Co., AL	W.H. Over	
	ANSP 163509	Cahaba River, Lilly Shoals, 6 miles E of Blockton, Bibb Co., AL	W.J. Clench and H. van der Schalie	1933
	ANSP 119168	Cahaba River, AL	C. Goodrich	
	ANSP 151496	Cahaba River, 1 mile N of Acton, AL	W.J. Clench and K. Okkelberg	Aug. 29, 1929
	ANSP 174827	Cahaba River, Buck Creek, Helena, Shelby Co., AL		
	ANSP 174828	Cahaba River, Montevallo, Shelby Co., AL		
	ANSP 174837	Cahaba River, near Anita, Shelby Co., AL		
	ANSP 8466	Cahaba River, Montevallo, Shelby Co., AL		
	FLMNH 83667	Cahaba River, near Helena, Shelby Co., AL	H.H. Smith, Leg:UA	
	FLMNH 83680	Cahaba River, Lilly Shoals, Bibb Co., AL	Leg: UA	
	FLMNH 84659	Spring by Little Cahaba River, near Leeds, Jefferson Co., AL	H.H. Smith, Leg:UA	August 22, 1912
	FLMNH 84401	Little Cahaba Creek, Jefferson Co., AL	H.H. Smith, Leg:UA	June 1916
	FLMNH 47276	Cahaba River, Suttle, Perry Co., AL	H. Lee	November 25, 1967

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Pleurocera vestita</i>	FLMNH 84402	Montevallo, Shelby Co., AL	Leg: UA	
	FLMNH 84580	Buck Creek, Helena, Shelby Co., AL	H.H. Smith, Leg:UA	
	FLMNH 84411	Montevallo, Shelby Co., AL	R.E. Call, Leg: UA	August 11, 1911
	FLMNH 84621	Spring Creek, Montevallo, Shelby Co., AL	H.H. Smith, Leg:UA	July 2, 1913
	FLMNH 84588	Cahaba River, @ mouth of Buck Creek, near Helena, Shelby Co., AL	Leg: UA	
	FLMNH 84499	Buck Creek, Shelby Co., AL	H.H. Smith, Leg:UA	July 1, 1913
	FLMNH 84638	Shelby Springs, Shelby Co., AL	Leg: UA	
	FLMNH 84385	Cahaba River, Shelby Co., AL	Leg: UA	
	FLMNH 84646	Shoals Creek, Montevallo, Shelby Co., AL	R.E. Call, Leg: UA	
	FLMNH 84645	Cahaba River @ mouth of Buck Creek, near Helena, Shelby Co., AL	H.H. Smith, Leg:UA	July 1, 1913
	FLMNH 84408	Town Creek, Montevallo, Shelby Co., AL	H.H. Smith, Leg:UA	
	FLMNH 84379	Cahaba River, W of Selma, Dallas Co., AL	Aldrich, Leg: UA	1885
	OSUM 606a	Little Cahaba River, Co. Rt. 10, 3.6 mi NW of Ashby, Bibb Co., AL	B. Kasson, T. Watters	July 29, 1986
	OSUM 18179	Little Cahaba River, Co. Rt. 10 bridge, 3.6 mi NW of Ashby, 5.3 mi ESE of Coleanor, Bibb Co., AL	G.T. Watters, W. Kasson	July 29, 1986
<b>Pulmonata</b>	UMMZ 239137	Cahaba River, AL		
<b>Lymnaidae</b>				
<i>Fossaria obrussa</i>	ANSP 10499	Cahaba River, 1 1/2 miles W of Gurley, Shelby Co., AL	H.H. Smith	
	ANSP 93066	Cahaba River, Spring Creek, 4 miles NW of Calera, AL	H.H. Smith	
	FLMNH 114553	Alabama River, Selma, Banks of the River, AL		
	FLMNH 114561	Montevallo, Town Creek, Shelby Co., AL	H.H. Smith	
	FLMNH 114551	Buck Creek, Helena, Shelby Co., AL	H.H. Smith	
	OSUM 5132	Cahaba River, 2 mi NNW of Sprott, NE of Marion National Fish Hatchery, Perry Co., AL	J.S. Ramsey, T. Wellborn, et.al.	June 26, 1967

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Fossaria obrussa</i>	UMMZ 243539	Cahaba River, near AL River, opp. Selma, Dallas Co., AL	L. Hubricht	April 17, 1960
	UMMZ 59297	Turkey Creek, 0.5 mi N of Mt. Pinson, Jefferson Co., AL		
	UMMZ 76252	Selma, Dallas Co., AL	J. Lewis collect	
<i>Pseudosuccinea columella</i>	FLMNH 114298	Selma, Dallas Co., AL		
	UMMZ 65979	Peavine Creek, Pelham, Shelby Co., AL		
	UMMZ 65978	Little Cahaba River, 2 mi N of Leeds, Jefferson Co., AL		
	UMMZ 73891	Cahaba River, Lily Shoals, Bibb Co., AL	H.E. Wheeler	
	UMMZ 73945	Calera, Shelby Co., AL	H.H. Smith	
	UMMZ 73952	Jackson, Clark Co., AL	H.H. Smith	
<b>Physidae</b>				
<i>Physella gyrina</i>	ANSP 93094	Cahaba River, Buck Creek, Helena, Shelby Co., AL	H.H. Smith	
	ANSP 93059	Cahaba River, Town Creek, Montevallo, Shelby Co., AL	H.H. Smith	
	ANSP 93057	Cahaba River, Spring Creek, Shelby Co., AL	H.H. Smith	
	ANSP 92960	Cahaba River, Calera, Shelby Co., AL	H.H. Smith	
	ANSP 124001	Cahaba River, Birmingham, Jefferson Co., AL		
	ANSP 93096	Cahaba River, Town Creek, Montevallo, Shelby Co., AL	H.H. Smith	
<i>Physella gyrina (alba)</i>	FLMNH 193570	Little Cahaba River, 6.5 mi SE of West Blocton, Bibb Co., AL	M. Pierson, S. Puleo	July 29, 1990
<i>Physella gyrina (aurea)</i>	FLMNH 87766	Perry Co., AL		
	UMMZ 65986	Buck Creek, Helena, Shelby Co., AL		
	UMMZ 65987	discharge of spring of Town Creek, Montevallo, Shelby Co., AL		
	UMMZ 69472	spring branch, 7 mi NE of Piper, Bibb Co., AL	H.H. Smith	
	UMMZ 116607	Town Creek, Montevallo, Shelby Co., AL	H.H. Smith	
	UMMZ 123524	Shoal Creek, Montevallo, Shelby Co., AL	H.E. Wheeler	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<i>Physella gyrina</i>	UMMZ 116614	Spring near Spring Creek, Shelby Co. AL	H.H. Smith	
	UMMZ 116613	Warson Creek, near Calera, Shelby Co., AL	H.H. Smith	
	UMMZ 116612	Buck Creek, Helena, Shelby Co., AL	H.H. Smith	
	UMMZ 157449	Beeswax Creek, Shelby Co., AL	H.H. Smith	
<i>Physella hendersoni</i>	UMMZ 123630	Uniontown, Perry Co., AL	Showalter	
	UMMZ 157462	Jackson, Clarke Co., AL	H.H. Smith	
	UMMZ 157463	Jackson Springs, Clarke Co., AL	H.H. Smith	
<i>Physella heterostropha</i>	ANSP 93010	Cahaba River, Spring Creek, Calera, AL	H.H. Smith	
	ANSP 93048	Cahaba River, spring near Spring Creek, Shelby Co., AL	H.H. Smith	
	ANSP 92964	Cahaba River, Spring Creek, 3 miles SW of Calera, AL	H.H. Smith	
	FLMNH 86509	Birmingham, Jefferson Co., AL		
	FLMNH 87600	Uniontown, Perry Co., AL		
	OSUM 5131	Cahaba River, 2 mi NNW of Sprott, NE of Marion National Fish Hatchery, Perry Co., AL	J.S. Ramsey, T. Wellborn, et.al.	June 26, 1967
	UMMZ 57956	Five Mile Creek, 5 mi NE of Birmingham, Jefferson Co., AL		
	UMMZ 65982	Little Cahaba River, 4 mi below Leeds, Jefferson Co., AL		
	UMMZ 65983	Cahaba River, 1/4 mi above Trussville, Jefferson Co., AL		
	UMMZ 65984	Cahaba River, Nunley Ford, W of Helena, Shelby Co., AL		
	UMMZ 65985	Peavine Creek, Pelham, Shelby Co., AL		
	UMMZ 143139	Selma, Dallas Co., AL	Kent Sci. Institute	
	UMMZ 157450	Lower Clear Creek, Shelby Co., AL	H.H. Smith	
	UMMZ 157452	Calera, Shelby Co., AL	H.H. Smith	
	UMMZ 157453	Spring Creek, Shelby Co., AL	H.H. Smith	

<b>Species</b>	<b>Museum #</b>	<b>Location</b>	<b>Collector</b>	<b>Date</b>
<b>Planorbidae</b>				
<i>Helisoma anceps</i>	FLMNH 230319	Little Cahaba River, 3 mi above Cahaba River, Bibb Co., AL	F.G. Thompson	July 21, 1978
	OSUM 19772	Cahaba River, US Rt 11 and RR bridges, Civitan Park, 14 mi NE of Birmingham, Jefferson Co., AL	C.B. Stein	July 12, 1971
	UMMZ 65974	Cahaba River, W of Henry Ellen, Jefferson Co., AL		
	UMMZ 65975	Six Mile Creek, Six Mile, Bibb Co., AL		
<b>Ancylidae</b>				
<i>Rhodacme filosa</i>	ANSP 76913	Cahaba River, AL		
	FLMNH 113680	Cahatchie Creek, Shelby Co., AL		
	FLMNH 219592	Little Cahaba River, 3.4 mi NNW of Six Mile, Bibb Co., AL	F.G. Thompson	October 22, 1975
	FLMNH 113780	Cahaba River, AL		

## **ATTACHMENT VIII**

**2008 Photographs of the triangular kidneyshell and the  
finelined pocketbook identified by the USFWS at locations  
upstream and downstream of Boom Location 1 and 2016  
Photographs of the round rocksnail at Boom Location 3**

Photo 1. Two triangular kidneyshells collected by USFWS (2008) at downstream shoal from Boom Location 1 area (canoe launch).



Photo 2. Fine-lined pocketbook collected by USFWS (2008) at downstream shoal from Boom Location 1 (canoe launch).



Photo 3. Round Rocksnail identified by the USFWS at Boom Location 3 (2016).



Photo 4. Snails located on rocky substrate near Boom Location 3 (2016).

